

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

## ANNOTATED BIBLIOGRAPHY

### IMPLICIT BIAS STUDIES

Extensive research has been done on the presence of implicit bias in the American population against Black people. The nature of implicit bias is that it is predominately subconscious and consequently is often uncorrelated with explicit commitment to egalitarian values. As defenders, we must be conscious of our own bias, conscious of how implicit bias affects our client as they move through the system, and work to overcome it. The following implicit bias studies document racial bias in the juvenile and criminal legal systems and are intended to expand our knowledge of implicit bias, both for self-education and to better understand the forces working against our clients of color.

These empirical studies are divided into three sections: I. Establishing the Presence, Nature, and Extent of Implicit Racial Bias, II. Implicit Racial Bias and the Decision to Shoot, and III. Overcoming Implicit Bias. The studies are cited in reverse chronological order. Please find the **most recent studies at the beginning of each section**. The Table of Contents at the beginning of the document lists the beginning page number for each section and a full citation for each study in that section. Please use Control+F (Command+F on Mac) to quickly locate a particular study's full description by searching within the document. The descriptions are pulled virtually verbatim from the articles cited.

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#### I. Establishing the Presence, Nature, and Extent of Implicit Racial Bias

**Kevin Roach et al., *At the Intersection: Race, Gender, and Discretion in Police Traffic Stop Outcomes*, 7 Journal of Race, Ethnicity, and Politics 239-261 (2022).**

##### Purpose

- To determine the relationship between purpose of stop (investigatory purpose or traffic safety violation), race of driver, and result of stop (search conducted, contraband found, etc.).

##### Methodology

- Analyzed data from more than 40 million traffic stops in Illinois, North Carolina, Connecticut, and Maryland—the four states that mandate publication of detailed accounts of all traffic stops.
- Compared data regarding purpose of the stop, race of the driver, whether the stop resulted in a search, and whether the search resulted in contraband being found.

##### Results

- Black male drivers are more likely to be searched and less likely to be found with contraband than white drivers, and this disparity is amplified when the initial purpose of the stop is investigatory.

##### Relevance

- This study suggests that officers' racial biases may make them more likely to find Black drivers suspicious, leading to higher rates of searches of Black drivers that result in no contraband found, particularly when stopped for discretionary investigatory purposes.



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### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

Rachel L. Bailey et al., *Camera Point-of-View Exacerbates Racial Bias in Viewers of Police Use of Force Videos*, 71 *Journal of Communication* 246-275 (2021).

#### Purpose

- To examine the influence of camera point-of-view (i.e., officer's body worn camera vs. footage recorded by an onlooker) and skin color of citizens in police use of force videos on how participants perceive the justness of the encounter.

#### Methodology

- 96 undergraduate students participated in the study
- Participants watched eight police use-of-force videos taken from publicly available footage taken from social media sites (e.g., YouTube). Half of the videos were taken from the body worn camera perspective (two with a white citizen and two with a Black citizen) and half from an onlooker perspective (two with a white citizen and two with a Black citizen). Audio was removed to mitigate confounding variables.
- Participants were then asked to evaluate police decision-making and treatment of the citizen in each video.
- To measure police decision making, participants rated (a) belief the officer(s) followed proper procedures and (b) belief use of force was justified on a 7-point scale ranging from "not at all" to "very." Higher scores indicate greater belief officers acted appropriately.
- To measure treatment of the citizen, participants rated (a) how likely it would be for the citizen (or citizen's family) to file a complaint about the incident on a 7-point scale ranging from "not at all likely" to "very likely" and (b) how the officer(s) should be disciplined on a 9-point interval scale from "none" to "criminal charges." Higher scores indicate greater belief officer acted appropriately.

#### Results

- Viewers reported (a) significantly more positive evaluations of police decision-making and (b) significantly fewer negative evaluations of treatment of citizens when responding to videos featuring dark-skinned citizens. These disparities were most prominent for the videos taken from the body worn camera perspective.

#### Relevance

- This study suggests that racial bias in the perception of police and citizen interactions persists even when viewers are presented with theoretically "objective" video evidence.



## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

**Pierce D. Ekstrom, Joel M. Le Forestier, and Calvin K. Lai, *Racial Demographics Explain the Link Between Racial Disparities in Traffic Stops and County-Level Racial Attitudes*, 43(4) Psychological Science 497-509 (2021).**

#### Purpose

- To determine the connection between racial disparities in police traffic stops and the explicit and implicit racial attitudes of the corresponding county.

#### Methodology

- County-level racial disparities in police traffic stops were computed by analyzing the proportions of Black and white drivers stopped in 64.6 million traffic stops from 13,082 counties across 24 states.
- County-level implicit racial attitudes were determined based on data from Project Implicit which measured participants' implicit attitudes using the Implicit Association Test (IAT). Positive IAT scores indicate more anti-Black/pro-white implicit attitudes (i.e., faster responses when categorizing Black faces with negative stimuli and white faces with positive stimuli than when the pairings are reversed). Explicit racial attitudes were determined based on Project Implicit data requiring participants to rate how “warm or cold” they feel toward “African Americans” or “Black people.”
- Racial disparities in police stops were compared with county-level implicit and explicit racial attitudes.

#### Results

- Across counties, Black drivers were stopped more frequently than white drivers.
- The level of stop disparities were correlated with county-level estimates of implicit attitudes and explicit attitudes—counties with relatively higher rates of anti-Black/pro-white attitudes showed relatively higher rates of anti-Black/pro-white stop disparities.

#### Relevance

- This study reaffirms existing evidence that Black drivers (compared to white drivers) are stopped by police at a rate disproportionate to their share of the driving-age population across the U.S.
- The results show that the racial attitudes of a county can be predictive of racial disparities in police stops.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

Justin D. Levinson, G. Ben Cohenà, & Koichi Hioki, *Deadly “Toxins”: A National Empirical Study of Racial Bias and Future Dangerousness Determinations*, 56 *Georgia Law Rev.* 225 (2021).

#### Purpose

- To determine whether jurors’ implicit and explicit racial biases are linked to their assessments of a defendant’s “future dangerousness” (utilized in capital punishment decisions).

#### STUDY 1A

##### Methodology

- Participants were 271 individuals taken from a national jury-eligible sample. Participants were diverse in terms of age, gender, race and ethnicity, and political preferences.
- Participants took an implicit associations test (IAT) designed to measure Black-white stereotypes. Participants were asked to categorize photos of Black and white men and women with words associated with “Positive” (the stimuli words being ambitious, industrious, successful, calm, trustworthy, ethical, and lawful) and words associated with “Negative” (the stimuli words being lazy, unmotivated, unemployed, hostile, dangerous, threatening, and violent).
- Participants were asked first to categorize Black faces with positive words and white faces with negative words, and then to categorize white faces with positive words and Black faces with negative words. If participants more quickly responded to Black faces with Negative words and white faces with Positive words, as compared to Black faces with Positive words and white faces with Negative words, an implicit racial bias exists.
- Participants’ explicit racial bias was measured with the Symbolic Racism 2000 Scale which required participants to self-report their racial biases by stating their level of agreement or disagreement with statements such as “It’s really a matter of some people not trying hard enough; if blacks would only try harder, they could be just as well off as whites.”

##### Results

- The Black-white stereotype IAT results confirmed that jury-eligible participants associated white with positive and Black with negative stereotypes. Participants were significantly more likely to quickly group together Black faces with negative stereotypes, such as lazy, violent, and unmotivated, and white faces with positive stereotypes, such as ambitious and ethical.

#### STUDY 1B

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#### Methodology

- Participants were asked to rate the future dangerousness of a specific defendant based on a short description of each crime committed. They were not told the race of the defendants. Participants responded to two descriptions of homicides and two of drug crimes and rated future dangerousness indicating to what extent they agreed or disagreed with statements regarding the dangerousness of the defendant (e.g., “The defendant is likely to pose a significant risk of danger in the future.”). No defendant names or racial identifications were provided.
- These ratings were compared with participants’ implicit and explicit bias scores from Study 1A.

#### Results

- Anti-Black implicit bias predicted assessments of future dangerousness in the two homicide cases, and explicit bias scores predicted participants’ assessments of future dangerousness in the two non-homicide cases. Participants with higher anti-Black explicit and implicit biases were more likely to rate the defendants’ future dangerousness higher.

#### STUDY 2A

##### Methodology

- Participants were 276 individuals taken from a separate jury-eligible sample. Participants were diverse in terms of age, gender, race and ethnicity, and political preferences.
- Participants took an IAT test specifically created for this study to measure anti-Black biases regarding future dangerousness. Stimuli words representing “future danger” were “Danger, Threatening, Vicious, Hostile, Wild, Menacing, and Violent,” and those representing “future safety” were “Safe, Generous, Helpful, Friendly, Calm, Gentle, and Kind.” Like in Study 1, participants categorized Black and white faces with these words. Participants who were quicker to categorize Black faces with “future danger” words than with “future safety” words exhibited implicit “future dangerousness” racial bias.
- In addition to the Black-white Future Dangerousness IAT, participants in Study 2 completed a Latino-white Future Dangerousness IAT requiring them to categorize white and Latino faces with the dangerousness stimuli words.
- Participants took the same explicit bias measure as was used in Study 1B.

##### Results

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- The Black-white future dangerousness IAT results confirmed jury-eligible participants significantly (and quite strongly) associated Black with danger and white with safety.
- Results of the Latino-white future dangerousness IAT confirmed that participants also strongly associated Latino with danger and white with safety.
- In the context of future dangerousness, jury-eligible citizens hold similar dangerousness stereotypes for Latino men as they do for Black men.

#### STUDY 2B

##### Methodology

- Participants were asked to rate the future dangerousness of six defendants in homicide cases based on a short description of the crime committed. Dangerousness was rated in the same way as in Study 1B. Participants in Study 2B were also asked to recommend whether the defendant should receive a life sentence or a death penalty sentence. The defendants' race and ethnicity were not disclosed, but defendants were given names that resembled popular names of Black Americans, white Americans, and Latino Americans.
- These ratings were compared with participants' implicit and explicit bias scores from Study 2A.

##### Results

- Participants with higher rates of explicit racial biases were more likely to predict future dangerousness determinations and death penalty decision-making. Mock jurors' explicit racial bias scores predicted life-death decisions (in each of the cases), and these explicit racial biases predict defendants' future dangerousness decisions. The greater anti-Black racial bias jurors had, the more dangerous they assessed all defendants to be.
- The name of the defendant had little to no effect on the dangerousness determination.

##### Relevance

- These studies provide evidence that jurors' future dangerousness assessments cannot be separated from their racial and ethnic biases against Black and Latino defendants.
- The results may help to explain in part why Black and Latino individuals are so disproportionately represented on death row.

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### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

**Yader R. Lanuza, Nick Petersen, & Marisa Omori, *Colorism in Punishment Among Hispanics in the Criminal Justice System*, 00 Social Problems 1 (2021).**

#### Purpose

- To determine whether skin tone of Hispanic adults influences arrest, conviction, and incarceration rates.

#### Methodology

- Examined court records and mugshot photos of 6,523 Hispanic adults arrested in Miami-Dade County between 2012 and 2015. On the arrest records examined, the race of the person arrested was provided by the arresting officer. However, all arrestees are categorized as either Black or white, with no “Hispanic” (or any other) distinguisher.
- Because records lacked a “Hispanic” category, arrestees were classified as Hispanic based on their surname. If more than 75% of individuals with their surname were Hispanic, according to U.S. Census data, that individual was classified as Hispanic for purposes of this study.
- Each arrestee’s skin tone was rated by research assistants using a 7-point scale ranging from 1=Very Light to 7=Very Dark. Each photo was rated by three individuals, and these scores were averaged to produce a final rating.
- Skin tone was then compared with whether the individual was convicted and, if so, whether the resulting sentence was carceral (prison or jail time) or non-carceral (e.g., probation, fines, diversionary program). Researchers controlled for several variables that may influence conviction and sentencing including number of prior convictions, severity of prior convictions, severity of currently charged crime, and indigent status of the defendant (making them eligible for a public defender).

#### Results

- Skin tone was positively correlated with conviction and incarceration in Hispanic defendants. The defendants with darkest skin tones were 17.5% more likely to be convicted and 19% more likely to be incarcerated than the defendants with lightest skin tones.

#### Relevance

- Disparities in conviction and incarceration rates based on skin tone of Hispanic defendants suggests the existence of colorism throughout multiple stages of the criminal system.

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### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

Joseph J. Avery et al., *Is Your Own Team Against You? Implicit Bias And Interpersonal Regard In Criminal Defense*, 161(5) *The Journal of Psychology* 543 (2021).

#### Purpose

- To determine the prevalence of implicit racial bias in criminal defense attorneys.

#### Methodology

- Participants were 327 criminal defense attorneys practicing in 43 states. 154 were private criminal defense attorneys, 152 were public defenders, and 21 did not fit into either category. Racial demographics were similar to those of all practicing attorneys.
- Participants received a sample prospective client along with a case file describing the client's alleged crimes. Client demographic information was delivered through a picture and name that were either stereotypically white, Black, or neutral (no picture or name given). Each participant had two clients in the same demographic category, one who allegedly committed a property crime, and one a drug crime.
- After viewing the case files, attorneys' regard for their clients was measured based on a scale adapted from the Medical Condition Regard Scale (designed to measure physicians biases and emotions toward patients). In the adapted scale, participants were asked to rate on a 1-6 scale the degree to which they agreed with statements about clients. Example items included "I prefer not to work with clients like this," "I enjoy giving extra time to clients like this" (reverse scored), "I feel especially compassionate toward clients like this" (reverse scored), and "There is little I can do to help clients like this."
- Participants' predicted recidivism of the client was measured by asking "In your opinion, how likely do you think it is that this individual will be arrested (for any crime) at some point in the future?" – rated on a six-point scale.
- Implicit racial bias of participants was measured using a race Implicit Associations Test (IAT) in which participants were asked to pair Black and white faces with positive and negative stimuli. Each participant was asked both to pair Black faces with positive words and white faces with negative words, and white faces with positive words and Black faces with negative words. If a participant was quicker to pair Black faces with negative words than positive, implicit racial bias was determined to be present.

#### Results

- Based on the implicit bias test, 75.8% of participants showed a preference for white (vs. Black) individuals.

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- Implicit bias of the attorneys correlated with their client regard scores such that participants with greater levels of white preference showed worse regard for Black clients.
- Implicit bias was also correlated with predicted recidivism such that, for Black drug-offense clients, attorneys with higher implicit bias scores had a greater belief that their client would reoffend. This correlation was smaller for Black property-offense clients, and not present for white clients.

#### Relevance

- This study suggests that implicit bias is not exclusive to adversarial criminal actors such as police, prosecutors, and judges, but exists within criminal defense attorneys as well.

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**Namita Tanya Padgaonkar et al., *Exploring Disproportionate Minority Contact in the Juvenile Justice System Over the Year Following First Arrest*, 31(2) J. of Research on Adolescence, 317-334 (2021).**

#### Purpose

- Examining how racial disparities relate to biased entry into and continued involvement with the system, while accounting for past and current offending, can provide context about the mechanisms behind overrepresentation.

#### Methodology

- The dataset included a longitudinal assessment of 1,216 Black, Latino, and white male adolescents ages 13-17 who were arrested for misdemeanors in either Louisiana, California, or Pennsylvania.
- Data were obtained via research interviews with youth, and official arrest and demographic data came from the probation department. Interviews were conducted a maximum of six weeks following their first arrest. Follow-up interviews were conducted 6 months and 1 year later.
- Data measured demographic information, neighborhood quality (including prevalence of graffiti, adults fighting, etc.) self-reported offending history, case status, and any time spent in a substance abuse or mental health treatment program.
- Data was then analyzed to determine the relationship between race and entry into the system, race and processing decision for initial arrest, and race and re-arrest.

#### Results



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- Black youth get arrested for the first time after committing fewer offenses than white youth.
- Black and Latino youth are more likely to be formally processed and not diverted.
- The odds of being rearrested were 71.1% higher for Black youth relative to white youth. This is despite similar levels of reoffending.
- Black youth did not offend more than white youth and did not commit more violent offenses relative to white youth.

#### Relevance

- Black youth are arrested at higher rates despite not committing more or more violent offenses compared to white youth.
- Institutional and structural racism inherent in children's neighborhoods and communities contribute to biased police strategies that can reinforce racial disparities in arrest and incarceration rates.

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**Shytierra Gaston and Rod K. Brunson, *Reasonable Suspicion in the Eye of the Beholder: Routine Policing in Racially Disadvantaged Neighborhoods*, 56(1) Urban Affairs Review 188-227 (2020).**

#### Purpose

- To understand the interplay between race (i.e., suspect race and neighborhood racial composition) and neighborhood context (i.e., socioeconomic conditions and crime rates) in shaping police-citizen encounters.
- To examine officer decision making and routine enforcement practices from the perspective of the police.

#### Methodology

- Analyzed 144 official reports of drug arrests submitted by police between 2009 and 2013 in similarly disadvantaged majority white, majority Black, and racially mixed neighborhoods in St. Louis. Reports contain descriptions of the arrest and narrative accounts of the preceding circumstances.
- Each report was then placed into one of four categories (traffic stop, pedestrian stop, officer response to citizen reports, drug investigation) based on the officer's description of how the arrest was initiated.
- The racial demographics of each arrest category was examined to look for racial disparities between neighborhoods.

#### Results

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- Discussion of results was limited to proactive policing (traffic and pedestrian stops), rather than officers responding to calls for service, as these methods allow for greater officer discretion and thus opportunity for racial bias.
- **Traffic stops:** In the racially mixed neighborhood, Black drivers accounted for 87% of traffic stops, despite accounting for only 54% of the population. The majority-white and majority-Black neighborhoods did not have similar discrepancies.
- **Pedestrian stops:** Officers' justification for pedestrian stops primarily had to do with the individual being in a "high-crime" or "crime-prone" area, rather than the individual's behavior. In the mixed-race neighborhood, officers detained Black pedestrians more frequently and with less cause than they did white pedestrians. Black pedestrians were more often stopped for things such as furtive motions, appearing nervous, or changing behavior when officers arrived, whereas white pedestrians were mostly stopped for engaging in or appearing to engage in criminal activity.

#### Relevance

- This study provides some evidence regarding the differential experiences with police between white and Black residents of high poverty neighborhoods. It also suggests that simply living in a "high-crime area" makes an individual more susceptible to being stopped by police, particularly if that individual is Black.
- Because the narratives used in this study were written by police officers who have incentive to omit or embellish accounts in attempt to present themselves in a positive light, it is highly possible that these results underestimate the true extent of racially biased policing.

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**Erin Cooley et al., *Racial Biases in Officers' Decisions to Frisk are Amplified for Black People Stopped Among Groups Leading to Similar Biases in Searches, Arrests, and Use of Force*, 11(6) Soc. Psych. And Personality Sci. 761-769 (2020).**

#### Purpose

- To determine whether racial disparities in police-civilian interactions are amplified when police interact with Black civilians encountered in groups.
- Other research establishes that Black groups are stereotyped as more "aggressive" and "untrustworthy" than Black individuals, and that people perceive groups, regardless of their racial composition, as more threatening than individuals. Researchers in this study examined whether Black people stopped in groups were treated more harshly than Black people stopped alone or white people stopped alone or in groups.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- Analyzed New York City Police Department “stop and frisk” data from 2006 to 2012 to test whether stops of Black people in groups are more likely to escalate to frisks, searches, arrests, and use of force than stops of Black individuals, white people in groups, or white individuals. The data included male and female civilians, but excluded Hispanic/Latinx people. The dataset analyzed 2,432,105 stops.
- Tested whether police were more likely to discover illegal contraband when they stopped Black people in groups (compared to white people). The researchers added this additional test to investigate whether the police’s decision to escalate a stop to a frisk, search, arrest, or use of force could be explained by “effective” use of reasonable articulable suspicion, rather than racial bias.

#### Results

- Across over two million police stops, being in a group amplified racial disparities in police decisions to frisk, search, arrest, and use force against Black people.
- The tendency for groups to amplify racial biases is smaller for searches and arrests than for frisks and use of force; however, these differences are small partly because searches and arrests are uncommon in the first place. When considered as a ratio, 1.03 Black people are searched per white person for individual stops, but 1.15 Black people are searched per white person for group stops.
- Being stopped in a group led to a 1.7% increase in racial disparities in use of force. Police used force against Black people stopped in groups in 26.8% of stops, compared to 16.8% of white people stopped alone or 21.6% of white people stopped in groups.
- The disproportionate escalation of stops of Black people in groups is not explained by accurate/effective policing (defined in the study as discovery of illegal contraband). Police were not more likely to find illegal contraband on Black people stopped in groups.

#### Relevance

- Disparate police treatment of Black people stopped in groups may be driven by societal racial biases, such as stereotypes of threat/aggression. There is no evidence to suggest that Black groups are more likely to be engaged in illegal activity.
- Highlights how decisions early in the stop and frisk process (disproportionate frisking experienced by Black people stopped in groups) may lead to disparate treatment throughout the encounter.
- Stereotypes and prejudice against Black people (including threat/aggression) may be amplified when Black people are in groups.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

Amy G. Haberstadt et al., *Racialized Emotion Recognition Accuracy and Anger Bias of Children's Faces, Emotion* (2020).

#### Purpose

- To determine whether implicit bias impacts adults' accuracy in recognizing the emotions on children's faces and whether adults are more likely to see Black children as angry versus their white peers.
- Researchers were particularly interested in whether teachers' implicit bias was linked to misperceptions of anger in Black youth, as this may be a possible cause of school discipline disparities.

#### Methodology

- Participants were 178 prospective teachers from southeastern universities. The sample was 89% female, 70% white, 9% Hispanic, 8% Asian, 6% Black.
- Researchers showed participants short video clips of children demonstrating facial expressions of six different emotions (angry, happy, sad, afraid, surprise, and disgust) developing from low intensity to moderate intensity of expression. The children pictured were ages 9-13 and equally divided between male/female and Black/white. Participants were asked to use their best judgment to determine the emotion depicted in each face.
- Participants also took an explicit bias test and an implicit bias test.

#### Results

- Both Black boys and Black girls were inaccurately seen as angry more often than white boys and white girls.
- Higher levels of either implicit or explicit bias did not increase odds of Black children being victim to anger bias, but instead decreased odds that white children would be misperceived as angry.
- Participants more accurately identified emotions (other than the anger bias described above) in white girls faces than Black girls, and surprisingly were more accurate in determining Black boys' emotions (again, other than anger bias) than white boys. Participants own implicit and explicit bias did not predict emotion recognition accuracy.

#### Relevance

- Adults are more likely to inaccurately perceive anger on Black children's faces.
- Implicit bias may cause teachers to extend privileges to white children that they do not afford to students of other races.
- Misperceiving anger on Black children's faces can help explain findings that Black students receive more frequent and harsher disciplinary actions than non-Black students (even when their behavior is the same).

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

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**Marie Pryor, Kim Shayo Buchanan, and Phillip Atiba Goff, *Risky Situations: Sources of Racial Disparities in Police Behavior*, 16 Annual Review of Law and Social Science 343 (2020).**

- This article identifies 5 factors that tend to increase the likelihood a police officer may behave in a racially disparate way:
  1. Discretion
    - a. In the absence of clear rules, officers are more likely to act in ways that favor white people and harm non-white people.
    - b. This arises in many areas of policing (e.g. conducting stops, using force, alleging a person is involved in a gang, working alone or on a small team in a school as an SRO).
  2. Inexperience
    - a. Newer officers may be even more susceptible to acting in biased ways.
    - b. Some research shows that increased training and practice may lower the chance an officer shoots an unarmed Black person.
    - c. Skills training can reduce bias only if the program does not itself reinforce racial biases.
  3. Salience of crime:
    - a. Powerful social stereotypes associate Black people with crime.
    - b. When shown Black faces, police officers are more likely to think of crime. When primed with thoughts of crime, police officers are more likely to discriminate against Black people.
    - c. This bias is reinforced in many officers' work assignments (e.g. being assigned to patrol a majority-Black neighborhood).
  4. Cognitive demand:
    - a. Police officers' work requires them to make life-altering decisions under intense time limits. This stress can reduce cognitive resources, making it more difficult to think clearly and make sound choices. In these frequently-occurring situations of high cognitive demand, police are more likely to act on racial bias. Long shifts or night shifts can make this worse.
    - b. Cross-racial interactions themselves may be an additional stressor, further increasing the likelihood a white officer will act in a racially disparate way toward a Black or Latinx person.
  5. Identity threat:
    - a. Police officers may experience "identity threat" when they fear they will be unfairly judged in accordance with the stereotype that police officers are racist. This identity threat causes stress and increased cognitive demand.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- b. Officers who are concerned about being judged as racist are more likely to act in racially disparate ways.
- c. Research shows police officers are more likely to use force if they believe community members view them as racist.
- d. Some officers may also experience identity threats related to gender, including “masculinity threat” (a man’s fear he will be judged as unmanly). While male officers in all roles are vulnerable to masculinity threat, officers assigned to less-confrontational roles, such as SROs or community-orientated policing, may especially fear their work is devalued and seen as less masculine. Officers may respond to masculinity threat by redoubling their commitment to violence or physical strength as means of affirming their alignment with masculine identity.
- e. When men experience “masculinity threat,” they often seek to restore threatened identity by using violence against people, such as women, effeminate men, or belligerent men, who might threaten that masculine identity. Racial disparities in use of force may be shaped in part by the interaction of racialized and gendered stereotype threats.
- The circumstances of police work in general tend to aggravate the risk for racially disparate behavior to occur. Given the large amount of power and discretion they are afforded, police officers are also less likely to face consequences and be held accountable for their discriminatory actions.
- Police departments should:
  - a. Review their training curricula to ensure they do not reinforce the stereotypical association between Blackness and crime;
  - b. Decrease cognitive demand by shortening shifts;
  - c. Train officers to manage their identity threats so they do not act in biased ways; and
  - d. Reduce discretion by creating systems of accountability for discrimination and inappropriate use of force.

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**Ronald Helms and S.E. Costanza, *Contextualizing race: a conceptual and empirical study of fatal interactions with police across US counties*, Journal of Ethnicity in Criminal Justice (2019).**

#### Purpose

- To determine patterns in police killings of civilians on a broader, county-wide level rather than individual interactions.
- To determine the influence of the racial makeup of a geographic location on the rate of police use of lethal force.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- Researchers examined police use of lethal force data from 3,081 U.S. counties and compared the rate of killings in a jurisdiction with the racial makeup of that jurisdiction.

#### Results

- Race, criminal violence, and general conditions of economic inequality are strong predictors of police killings of civilians. Lethal violence by police is more frequent in areas with large African American and Hispanic populations.

#### Relevance

- This study provides a structural look at police violence beyond individual interactions to show that the racial demographics of a geographic location are strong predictors of police use of lethal force against civilians.

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**Alana Saulnier, Kelly C. Burke, and Bette L. Bottoms, *The Effects of Body-Worn Camera Footage and Eyewitness Race on Jurors' Perceptions of Police Use of Force*, 37 Behav. Sci. Law 732-750 (2019).**

#### Purpose

- To determine whether eyewitness race and watching body-worn camera (BWC), reading a transcription of BWC, or being told there was no BWC evidence had different effects on mock jurors' case judgments in a case in which a community member (defendant) was charged with resisting arrest but where the officer's use of force in conducting the arrest was controversial.

#### Methodology

- 263 college psychology students participated in the study. Participants watched a narrated PowerPoint summary of the case. Participants were told that the defendant had been arrested by an officer; that the defendant was charged with resisting arrest; and that the defense disputed the charge, claiming that the officer's use of excessive force made compliance impossible.
- The summary included photographs of each of the arresting officer (a white man); the defendant (a Black man); a bystander eyewitness testifying for the prosecution (a white man); and a bystander eyewitness testifying for the defense (a woman whose race was manipulated)
- Participants either watched actual footage of the arrest (viewed condition), read a transcript of the audio recorded by the BWC (transcribed condition), or were not



## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- told there was BWC evidence at all (absent condition). Each mock case had a bystander eyewitness, testifying for the defense, whose race was manipulated by presenting the eyewitness as either Black or white.
- Participants were asked to give a verdict of guilty or not guilty. Participants were also asked to rate the justifiability of the officer's use of force, the culpability of the officer and defendant in the incident, and the credibility of the officer, defendant, and eyewitnesses on a scale of 1 to 5 with 5 being the most justifiable/culpable/credible and 1 being the least.

#### Results

- **Effects of BWC Conditions:** When BWC footage of the arrest was viewed, compared with transcribed or absent, participants were less likely to vote the defendant guilty of resisting arrest, and also rated the officer's use of force less justifiable, and the officer more culpable and less credible. The odds of the defendant being found guilty of resisting arrest increased 1.85-fold when participants were in the BWC absent condition compared with the BWC viewed condition. The odds of the defendant being found guilty of resisting arrest increased twofold when participants were in the BWC transcribed condition compared with the BWC viewed condition.
- **Effects of Bystander Witness Race:** When the eyewitness supporting the defendant was white, mock jurors were less likely to vote the defendant guilty of resisting arrest, as well as more likely to consider the defendant credible and the officer culpable for the incident.

#### Relevance

- This study suggests that the existence of BWC footage, and specifically allowing jurors to view such footage, can help to prevent a defendant from being convicted of resisting arrest.
- The results provide evidence that jurors have racial biases against Black witnesses as compared to white witnesses.

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**Rory Kramer and Brianna Remster, *Stop, Frisk, and Assault? Racial Disparities in Police Use of Force During Investigatory Stops*, 52(4) Law and Society Review 960-993 (2018).**

#### Purpose

- To determine whether racial disparities exist in police use of force during stops.
- To assess the effectiveness of recent police reforms (specifically New York's shift away from stop-and-frisk) in reducing inequalities in police use of force.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- Examined data from over 2 million police stops in New York City from 2007-2014
- Analyzed racial disparities in the stops that used *any* force (from putting hands on a subject to drawing a weapon). Disparities were examined both for uses of force that resulted in arrest/contraband found and those that did not.
- Analyzed racial disparities in the stops in which the officer drew or pointed their service weapon. Weapon drawn stops are broken up into those that resulted in arrest/contraband found and those that did not.
- Other factors that could explain racial disparities in use of force (civilian behavior, local crime rates, result of the stop, etc.) were examined. The age of the individual being stopped was also included.

#### Results

- Controlling for alternative explanations including civilian behavior, the success of the stop, local crime rates, and neighborhood context, Black civilians have 27 percent higher odds of experiencing force during a stop than white civilians and 28 percent higher odds of officers drawing their guns
- Black civilians are particularly more likely to experience potential lethal force when police uncover criminal activity, and this disparity is marginally greater for Black youth compared to white youth.
- If there were no racial disparities in police use of force, an estimated 61,000 fewer stops of Black civilians would have included police use of force and 1,000 fewer stops would have included potential lethal force from 2007 to 2014.

#### Relevance

- This study highlights the racial disparities not just in the rate of stops, but the experiences of citizens after a stop is initiated.
- It also exemplifies that Black and white civilians experience fundamentally different interactions with police.

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**Lois James, *The Stability of Implicit Racial Bias in Police Officers*, 21(1) Police Quarterly 30-52 (2018).**

#### Purpose

- To examine the stability of implicit racial bias in police officers from day-to-day and whether it is influenced by fatigue.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- 80 police officers were given a Weapons Implicit Association Test (IAT) on four separate occasions which measures implicit racial bias based on how strongly participants associate Black Americans with weapons as opposed to harmless objects. Participants were asked to categorize Black faces with weapons and white faces with harmless objects, and to categorize white faces with weapons and Black faces with harmless objects. If a participant more quickly categorizes Black faces with weapons and white faces with harmless objects, as compared to Black faces with harmless objects and white faces with weapons, an implicit racial bias exists.
- Officers' sleep was also monitored using technology placed on their wrist.

#### Results

- Officers' IAT scores varied significantly across testing days, and differences in IAT scores were associated with officers' sleep. When officers slept less prior to testing, they demonstrated a stronger association between Black Americans and weapons.

#### Relevance

- This study indicates that even an officer who scores well on an implicit bias measure one day may still exhibit racial bias on another.
- The results also suggest that implicit bias is not stable and factors such as fatigue can increase an individuals' bias. Such evidence can be used to argue that an officer's actions were motivated by bias, even if they exhibit low levels of bias in another context or at another time.

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**Peter S. Lehmann, *Sentencing Other People's Children: The Intersection of Race, Gender, and Juvenility in the Adult Criminal Court*, 41(5) Journal of Crime and Justice 553 (2018).**

#### Purpose

- To determine whether youth of color receive harsher sentences in adult criminal cases compared to white youth or adults of any race.

#### Methodology

- The dataset includes people sentenced for felonies in Florida circuit courts between 1995 and 2006. The study population included 1,107,233 people ages 14-89 at the time of offense, 30,733 of whom were transferred from juvenile court.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Researchers analyzed the data to determine the joint effects of race, gender, and age on sentencing outcomes. Sentencing outcomes examined included the decision to incarcerate (prison or jail) and the length of incarceration term. Researchers controlled for offense type.

#### Results

- Black, Hispanic, and male adults and youth were sentenced more harshly than whites and females.
- Youth are sentenced more severely in criminal proceedings (in terms of length of prison and jail sentences) than both young adults and older adults.
- For sentences to prison and jail sentence length, Black male youth (transferred from juvenile to adult court) are sentenced more harshly than other youth and adults.
- While Black male adults are most likely to be sentenced to jail compared to all groups, Black males ages 14-17 have a greater likelihood of receiving this sentence than youth of other races.

#### Relevance

- Transfer to adult court exposes Black youth to biased sentencing and additional risk of unfairly harsh punishments compared to white youth.

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**Luca Guido Valla et al., *Not Only Whites: Racial Priming Effect for Black Faces in Black People*, 40(4) Basic & Applied Social Psychology 195-200 (2018).**

#### Purpose

- Recognizing that the presence of even non-conscious stereotypes can influence behaviors, researchers in this study wanted to test whether Black faces are implicitly associated with dangerousness.

#### Methodology

- Sixty one adults participated in the study. 31 were white and 30 were Black.
- Participants were given a “racial priming” task. They were shown either a white, Black, or “scrambled” face. They were then shown either a “dangerous” object (such as a gun or knife) or a “non-dangerous” object (e.g. rubber duck or an apple). Researchers tested the accuracy and speed at which participants labeled an object dangerous or non-dangerous after having been shown either a white, Black, or scrambled face.

#### Results

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Both Black and white participants were faster to categorize objects as dangerous after having been primed with a Black face, showing that Black faces may be generally associated with a feeling of danger.

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**Jamalia Blake, Rebecca Epstein & Thalia Gonzalez, *Girlhood Interrupted: The Erasure of Black Girls' Childhood*, Georgetown Law Center on Poverty and Inequality (2017).**

#### Purpose

- To determine whether adults assign Black girls qualities that render them more like adults—and less innocent—than their white peers.

#### Methodology

- The study adapted a scale of childhood innocence created by Phillip Goff and colleagues used during his similar study assessing the innocence of Black boys. The scale was comprised of items associated with adultification and stereotypes about Black women and girls. The periods of adolescence and childhood were divided into four age brackets: 0-4; 5-9; 10-14; and 15-19 years old.
- Researchers used a nine-item questionnaire to survey 325 adults from various racial and ethnic backgrounds and different educational levels across the United States who were recruited through an online service in order to obtain a community sample of typical adults. Participants were predominantly white (74 percent) and female (62 percent) and more than half (69 percent) held a degree beyond a high school diploma.
- Respondents were not informed of the survey's purpose, but instead were asked only to complete a questionnaire about their beliefs about children's development in the 21st century. Each participant was randomly assigned either to a questionnaire that asked about the respondent's perception of Black girls, or to a questionnaire that asked the same questions about the respondent's perception of white girls.

#### Results

- Data showed that adults view Black girls as *less innocent and more adult-like than their white peers*. The most significant differences were found in the age brackets that encompassed mid-childhood and early adolescence—ages 5–9 and 10–14—and continued to a lesser degree in the 15- to 19-year-old age bracket. No statistically significant differences were found in the age group 0–4.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Specifically, the study found that, compared to white girls of the same age, survey participants perceived that:
  - Black girls need less nurturing.
  - Black girls need less protection.
  - Black girls need to be supported less.
  - Black girls need to be comforted less.
  - Black girls are more independent.
  - Black girls know more about adult topics.
  - Black girls know more about sex.

#### Relevance

- Given established discrepancies in law enforcement and juvenile court practices that disproportionately affect Black girls, the perception of Black girls as less innocent and more adult-like may contribute to *more punitive exercise of discretion* by those in positions of authority, *greater use of force, and harsher penalties*.
- In light of proven disparities in school discipline, the perception of Black girls as less innocent may contribute to *harsher punishment* by educators and school resource officers. Furthermore, the view that Black girls need less nurturing, protection, and support and are more independent may translate into *fewer leadership and mentorship opportunities* in schools.

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**John Paul Wilson, Kurt Hugenberg, Nichols O. Rule, *Racial Bias in Judgments of Physical Size and Formidability: From Size to Threat*, 113(1) Interpersonal Relations and Group Processes, 59-80 (2017).**

#### Purpose

- To examine whether young Black men are perceived as more physically threatening than young white men and whether this may play a role in young Black men being disproportionately targeted by police even when unarmed.

#### STUDY 1

##### Methodology Study 1A

- Researchers asked 111 non-Black participants to estimate either the height or weight of young Black and white men after being shown photos of only their faces. There were 200 photos in the series.

# Empirical Studies:

## Implicit Racial Bias in the Criminal/Juvenile Legal Systems

### Results

- Participants estimated Black men as significantly taller and heavier than white men.

### Methodology Study 1B

- Researchers replicated 1A but used photos of young people aged 16-19 whose height and weight were publicly available (high school football players being recruited to play college football).
- 30 non-Black U.S. residents were presented with color photographs of 90 male faces (evenly split between white and Black).
- Participants rated all 90 faces on estimated height and weight.

### Results

- Participants judged Black men as taller and heavier than white men.
- When comparing to their actual heights and weights, researchers found that Black men appeared taller and heavier than white men even when controlling for their actual height and weight.

### Methodology Study 1C

- 60 non-Black participants were shown the same faces from part B and asked to select a body (out of a choice of 7) that best matched the face. The bodies looked identical except that they varied in muscularity.

### Results:

- Participants selected more muscular bodies for Black faces.

### Methodology Study 1D

- 60 non-Black participants were shown the same athlete faces as in Studies 1B and 1C and asked to indicate how strong the person appeared from 1 (not at all strong) to 7 (very strong) for each face presented in a random order.

### Results

- Participants rated Black faces as stronger than white faces.

### Methodology Study 1E

- Researchers wanted to compare differences in perceptions of Black and white faces to their actual upper-body strength. Previous research shows that upper-body strength reliably signals fighting ability and can be accurately estimated from photos of individuals' bodies and faces.
- Researchers downloaded photos of participants in the 2015 NFL Draft Combine for whom measures of upper-body strength (i.e. bench press performance data) were publicly available. Researchers selected every white player with a listed bench



## Empirical Studies:

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- press total (because there were fewer white players) and matched him with a Black player with a similar bench press total.
- In the resulting sample of 64 football players, the Black football players bench pressed no more than the white players, and the Black and white players weighed about the same. The Black targets were slightly shorter than the white targets.
  - Researchers showed the participants photos of these players' faces and asked them to estimate how strong each player appeared from 1 (Not at all strong) to 7 (Very strong).

#### Results

- Participants predicted that Black men were stronger than white men. The researchers concluded that this is evidence for substantial racial bias in judgements of strength.

#### Study 1 Relevance

- Not only do people overestimate young Black men as taller and heavier than young white men in numerical terms (Studies 1A and 1B), they also believe they have larger, more muscular, and thus more formidable physiques (Study 1C), and perceive them to be stronger than white men (Study 1D) even when controlling for actual strength (Study 1E).

#### STUDY 2

##### Methodology

- Participants were 168 non-Black U.S. residents, 92 male and 76 female.
- Researchers used the same stimuli and procedures as in Study 1B except that, instead of assessing perceived body size, researchers asked participants to “imagine that you are arguing with this person and he becomes physically threatening. If you were fighting with this person, how capable would he be of physically harming you?” Participants selected a response on a scale from 1 (Not at all capable) to 8 (Very capable).

##### Results

- When asked to consider Black and white men's potential capacity for harm, participants again showed a robust race-based bias, perceiving Black men as more capable of harm than white men. This was true even though there was no actual difference in physical size.
- The results “strongly suggest that this race-based bias in perceived formidability results from perceivers' beliefs about race (i.e., stereotypes) rather than an accurate inference of physical size based on facial cues.”

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### STUDY 3

##### Methodology

- Participants were 110 non-Black U.S. residents (61 male and 49 female).
- Researchers asked participants to rate each of the 90 athlete faces used in Studies 1B-1D and 2 on both muscularity (by asking them to match the face to a body like in Study 1C) and harm potential (like in Study 2).
- Researchers also asked participants to complete separate “feeling thermometers” (which have been shown to reliably measure explicit prejudice) for Black people and white people.

##### Results

- The results of Study 1C and Study 2 were replicated. Participants rated Black targets as more muscular and more capable of harm than white targets.
- There was not a correlation between explicit racial prejudice and perception of size and harm; however, preferences for whites over Blacks did weakly associate with the participants’ harm capability judgments.
- The researchers concluded that race-based differences in perceptions of physical size are not easily explained by general anti-Black prejudice, but instead are likely the result of specific stereotypes associating Black people with size and threat. They investigated this further in Study 4.

#### STUDY 4

##### Methodology

- Researchers investigated whether the relationship between misperceptions of size and harm capability among Black and white targets would differ according to participants’ race.
- Participants were a total of 240 U.S. residents, made up of 60 Black males, 60 Black females, 60 white males, and 60 white females.
- Researchers used the same stimuli and procedures as in Study 3, except that they did not assess explicit prejudice.

##### Results

- All participants judged Black men as more muscular than white men, but white participants rated the Black men as much more muscular than the white men. Black participants rated the Black men as more muscular than the white, but to a considerably lesser extent.
- When measuring perception of harm, white participants showed a clear tendency to see Black men as more capable of harm than white men, whereas Black participants saw both Black and white men as similarly capable of harm.

## Empirical Studies:

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- Finally, researchers found that both Black and white participants were more sensitive to the perceived muscularity of Black targets when making harm capability judgements, as both groups associated muscularity with harm more for Black targets than for white targets.

#### STUDY 5

##### Methodology

- Participants were 77 non-Black U.S. residents.
- Researchers asked participants to imagine that each of the 90 men whose faces used above (Study 1B) had behaved aggressively toward a police officer but was not wielding a weapon. They then viewed each face in random order and judged the extent to which it would have been appropriate for police to use force to subdue him from 1 (Not at all appropriate) to 7 (Very appropriate).
- Researchers tested whether participants' force justification ratings differed by race and then investigated the relationship between force justification and the perceptions of size and formidability (borrowed from the previous studies).

##### Results

- Participants rated the use of force against Black men as more justified than the use of force against white men.
- The racial bias in size and harm perceptions that were observed in previous studies extended to justifications of the hypothetical use of force against unarmed suspects of crime. People judged Black men as larger and more harmful than white men, thus rendering them more suitable recipients of physical force.

#### STUDY 6

##### Purpose

- To determine if racial bias in formidability judgements would be more pronounced for Black and white targets high in Afrocentricity by asking participants to rate their faces for how Afrocentric they look. Researchers expected to find that both Black and white faces that appeared more prototypically Afrocentric (based general perception as well as perception of skin tone and structural features) would be seen as belonging to larger, more muscular, and physically formidable than Eurocentric faces.

##### Methodology

- Using the 90 high-school athlete faces from the studies above, researchers asked participants to rate the targets' global Afrocentricity to "not at all Afrocentric" to "very Afrocentric" after defining Afrocentric as "darker skin tone, a wider nose,

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### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

and thicker, fuller lips.” Then researchers obscured skin tone using Photoshop to convert the images to gray-scale and asked participants to again rate each face’s Afrocentricity based on facial features alone (not including skin tone). Researchers evaluated the extent to which Afrocentricity was associated with participants’ judgements of size and formidability from previous studies described above.

#### Results

- Researchers “found that face-based perceptions of racial prototypicality predicted judgments of physical formidability. Judgments of physical formidability therefore appear to be subject not just to social categorical information related to race, but also may relate to perceptions of specific race-related appearance cues.”

#### STUDY 7

##### Methodology:

- Researchers investigated whether imposing beliefs about the race of racially ambiguous targets would similarly affect judgments of physical size.
- Researchers presented 121 non-Black participants with images of male bodies that were color-inverted to conceal their race.
- They lead the participants to believe that the bodies were either Black or white by presenting them with a Black or white face (or a stereotypically Black or white name) that supposedly identified the body’s identity.
- They showed participants the same body with both a white face/name and a Black face/name. They asked participants to estimate height and weight.

##### Results

- Researchers’ found that participants’ associations between race and physical size were strong enough to bias their judgments of the size of identical bodies simply because they were led to believe that they were Black or white.
- Participants perceived racially ambiguous bodies as both taller and heavier when labeled as Black than when they were presented with the exact same body labeled white.

##### Overall Results

- People have a bias to perceive young Black men as bigger (taller, heavier, more muscular) and more physically threatening (stronger, more capable of harm) than young white men.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- This racial bias persisted even when upper-body strength was controlled (suggesting that racial differences in formidability judgements are a product of bias rather than accuracy).
- Biased formidability judgments in turn promoted participants' justifications of hypothetical use of force against Black suspects of crime.

#### Relevance

- Due to implicit racial bias, police officers may inaccurately perceive young Black men as larger, stronger, and more threatening than they actually are.
- Biased perceptions of young Black men's physical size may play a role in police disproportionately using force against them even when unarmed.

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**Rob Voigt et al., *Language from Police Body Camera Footage Shows Racial Disparities in Officer Respect*, 114(25) *Proceedings of the National Academy of Science* (2017).**

#### Purpose

- To analyze the respectfulness of police officer language toward white and Black community members during routine traffic stops.

#### Methodology

- Researchers conducted a systematic analysis of officer body-worn camera footage, using a computer program designed by linguists to assess respectfulness of word choice in transcripts from the footage.
- The computer program analysis was based on linguistic theories of respect that model how speakers use respectful language (apologizing, gratitude, expression of concern, giving agency, softening of commands, etc.) to mitigate tense interactions. It also measured language considered more disrespectful ("hands on the wheel," informal titles, negative words, first names).
- The dataset consisted of transcribed body camera footage from 981 vehicle stops of white and Black community members conducted by the Oakland Police Department over a 1 month time period.

#### Results

- Officers speak with consistently less respect toward Black versus white community members, even after controlling for the race of the officer, the severity of the infraction, the location of the stop, and the outcome of the stop.
- While the racial disparities are clear and consistent, the causes are less clear. The researchers make clear that the driver's own speech cannot be the sole cause of officers lack of respect. They observed racial disparities in officer respect even in

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- police utterances from the initial 5% of an interaction, suggesting officers speak differently to Black community members even before the driver has had the opportunity to say much at all.
- Officers showing people respect plays an important role in establishing police legitimacy.

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**Thomas Frank, *Black People are three times more likely to be killed police chases*, USA Today (Dec 1, 2016).**

#### Purpose

- To examine racial disparities in police chases and corresponding fatalities.

#### Methodology

- USA TODAY examined federal records for 5,300 fatal pursuits since 1999, when the government started tracking the races of people killed in car crashes.
- USA TODAY also took a deeper look at 702 chases in 2013 and 2014, reviewing thousands of pages of police documents and hours of video of pursuits across the nation.
- One way to measure police racial bias is to compare incidents that happened in the daytime, when it's easier for the police to see the color of someone's skin, with those that happened in the dark. USA TODAY analyzed fatal pursuits the same way. USA Today analyzed thousands of records obtained from Texas and Tennessee. These states were examined because they are the only two states that keep track.

#### Results

- Blacks have been killed at a disproportionate rate in pursuits every year since 1999. On average, 90 Black people were killed each year in police chases, nearly double what would be expected based on their percentage of the population.
- Deadly pursuits of Black drivers were twice as likely to start over minor offenses or non-violent crimes. In 2013 and 2014, nearly every deadly pursuit triggered by an illegally tinted window, a seat-belt violation or the smell of marijuana involved a Black driver. Chases of white drivers, by comparison, tended to involve crimes that posed a more obvious danger to the public. Three-quarters of fatal chases involving white drivers began over felonies or offenses such as speeding or driving recklessly or drunk.
- Black people were more likely than whites to be chased in more crowded urban areas, during peak traffic hours and with passengers in their cars, all factors that can increase the danger to innocent bystanders. Chases of Black motorists were about 70 percent more likely to wind up killing a bystander.
- In daylight, 31% of the drivers involved in deadly police chases were Black. In darkness, 21% of the drivers in deadly chases were Black.

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- USA TODAY found no evidence that officers overtly considered a suspect's race in deciding whether to stop or pursue. But research suggests that a suspect's race can subtly influence how police react to him or her.

#### Relevance

- States and the federal government do so little to track chases or the people killed during them which makes determining causes, contributing factors, and interventions to prevent these incidents nearly impossible.
- Police practices that affect minorities disproportionately can be considered discrimination even if there is no evidence of racist intent.

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**Ryan D. King and Brian D. Johnson, A Punishing Look: Skin Tone and Afrocentric Features in the Halls of Justice, American Journal of Sociology, 122:1 (July 2016).**

#### Purpose

- To investigate the association between offender's skin tone, Afrocentric facial features, and criminal punishment.

#### Methodology

- 866 booking photos of Black and white male felony defendants sentenced in 2009, in Ramsey and Hennepin Counties in Minnesota.
- The photos were categorized as white or Black, rated on a scale of 1-7 based on skin tone, and Afrocentric versus Eurocentric features were rated on a scale of 1-7. Defendants were then matched with sentencing records indicating whether the defendant was sentenced to time in prison (and if so the length of the sentence according to court records), a stayed execution of a prison sentence provided the defendant does not violate conditions of release, or no prison term. Using the Minnesota Sentencing Guidelines, researchers then determined what the official sentencing recommendation should have been. Researchers also considered whether defendants had private attorneys.

#### Results

- Black defendants were 78% more likely to receive a prison sentence than white offenders. They were also significantly less likely to be represented by a private attorney. However, there were no significant racial differences in sentence lengths for defendants who did receive prison sentences.
- Defendants with darker skin tone and Afrocentric facial features are associated with harsher sentences. The odds of dark-skinned Black defendants receiving a stay of execution rather than no prison sentence was almost twice as high and 3.5 times more likely to receive a prison sentence. Each unit of increase on the Afrocentric features



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scale from 1-7 increased the likelihood of a stay of execution by 13% and prison by 30%.

- The probability of a white defendant receiving a prison sentence doubled if the white defendant had Afrocentric facial features.

#### Relevance

- Research tends to treat Black and white as distinct racial categories rather than accounting for variations in skin tone. Few studies account for variations in skin tone or facial features and sentencing in the criminal justice system. The findings from this study shows a no evidence of color bias in sentencing, but does find that darker skin tone and Afrocentric facial features are correlated with harsher sentences. Darker skinned Black defendants receive harsher sentences than lighter skinned Blacks.

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**Andrew R. Todd, Kelsey C. Thiem, and Rebecca Neal, *Does Seeing Faces of Young Black Boys Facilitate the Identification of Threatening Stimuli?*, 27 Psychological Sci. 384 (2016).**

#### STUDY 1

##### Purpose

- The general purpose of each study below was to test whether biases about Black men and violence extend to Black boys (even as young as 5 years old).
- Study 1's specific purpose was to establish that exposure to a Black boy's face can decrease the perceptual threshold for recognizing guns based on a subject's bias.

##### Methodology

- Subjects were 63 white undergraduate students (43 women, 20 men) who participated for course credit.
- Subjects completed a categorization task in which two images flashed on the monitor in quick succession. Participants were instructed to ignore the first image (the prime), which was always a face; it merely signaled that the second image was about to appear. Instead, their primary task was to quickly and accurately categorize the second image (the target object) as a gun or a toy by pressing one of two response keys.
- The prime photos were of 12 boys, 6 white and 6 Black. The target objects were 6 gun images taken from Payne (2001) and 6 toy images (e.g., a rattle) taken from online sources. The toy images were converted to gray scale and sized to match the gun images.

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- Each trial sequence began with a blank screen (500 ms), followed by a face prime (200 ms), then a target object (200 ms), and finally a pattern mask (which remained on screen until participants responded)
- After completing the weapon identification task, participants rated the age and race-ethnicity of the face in each photo as well as how threatening the face seemed.

#### Results

- The analysis revealed that the racial bias in weapon identification was driven entirely by differences in estimates of automatic processing. Controlled processing reflects the ability, independent of response biases, to distinguish guns from toys, whereas automatic processing reflects the unintentional biasing influence of race of prime when control fails. Automatic-processing estimates were greater for Black-child primes than for white-child primes.

#### Relevance

- Implicit biases commonly observed in response to seeing Black men's faces may also emerge in response to seeing young Black boys' faces. People are more likely to perceive innocuous objects (i.e. toys) as guns when associating the object with a Black child than with a white child.

#### STUDIES 2A and 2B

##### Purpose

- To clarify remaining questions from “Study 1” about implicit associations between Black youth and innocuous objects.
  - In the first study, the target-object stimuli comprised guns and toys—objects typically associated with adults and children, respectively. Thus, it was possible that the findings simply reflected stronger implicit associations between Black children and adult-related objects and between white children and child-related objects. Researchers wanted to ensure results to reflected associations with threatening stimuli, not merely adultification.
  - Second, because the prime stimuli in Study 1 comprised only children's faces, it was unknown how the magnitude of racial bias for child primes compares with that for adult primes.
- These questions were addressed in Experiments 2a and 2b by having participants categorize guns and tools—two objects that are clearly associated with adults—after brief presentations of faces of various ages and races.

##### Methodology

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- Subjects were undergraduate students for course credit. There were 59 participants (36 women, 23 men) in Study 2a and 66 (38 women, 28 men) in Study 2b.
- The method used was the same as Study 1 with a few additional factors:
  - Along with the photos of boys, researchers included 12 photos of men (6 Black, 6 white) taken from the Chicago Face Database.
  - Second, the toy images were replaced with 6 images of tools. Each of the 24 face primes (12 boys, 12 adults) was paired once with each of the 12 target objects.
  - Sixteen practice trials preceded the experimental trials.
- In Study 2a, the adult and child primes appeared in separate, counterbalanced blocks of trials. In Study 2b, the adult and child primes appeared together in a single block of trials.

#### Results

- In Studies 2a, and 2b, revealed that briefly presented faces of young Black boys led to claims of having seen a gun when there was none.
- Participants identified guns more quickly after Black primes than after white primes in both Study 2a and 2b. Conversely, participants identified tools more quickly after white primes than after Black primes in both Study 2a and 2b.
- Neither study, however, found support for the more specific hypothesis that youth would attenuate race-based threat associations. Study 2a results indicated comparable racial bias after child and adult primes. Study 2b's results suggests that, if anything, racial bias was slightly stronger after child primes than after adult primes.

#### Relevance

- Again, racial bias causes innocuous items, in this case tools, to be misidentified as weapons at a higher rate, when held by Black boys and men versus white boys and men.

### STUDY 3

#### Purpose

- To investigate whether associations with threat-related words, instead of objects, also trigger certain stimuli based on biases when associated with Black boys versus white boys.

#### Methodology

- Subjects were 62 white undergraduate students participating for course credit (32 women, 30 men).

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- To examine this possibility, researchers used a sequential priming task that was similar to the weapon identification tasks from the prior studies, but researchers replaced the gun and tool images with word stimuli.
- The participants' task was to ignore the prime images and instead to rapidly and accurately categorize the words as threatening (*violent, dangerous, hostile, aggressive, criminal, and threatening*) or safe (*innocent, harmless, friendly, trustworthy, peace-ful, and safe*).

#### Results

- Participants misidentified safe words as threatening more often after Black primes than after white primes, whereas they misidentified threatening words as safe more often after white primes than after Black primes.
- Participants identified threatening words marginally more quickly after Black primes than after white primes.
- They also identified safe words more quickly after white primes than after Black primes, but this effect was not significant.
- Participants also misidentified safe words as threatening more often after adult primes than after child primes, whereas they misidentified threatening words as safe more often after child primes than after adult primes. This pattern of response suggests that youth may modulate general threat associations.

#### Relevance

- All four studies provided converging evidence that brief presentations of Black male faces—whether of adults or children—primed with the detection of threatening objects (i.e., guns) and increased accessibility of threat-related words.
- Furthermore, these racial biases were driven entirely by differences in automatic processing; indeed, we found no differences in estimates of controlled processing.
- The collective findings, therefore, support the hypothesis that youth sustains, rather than attenuates, *race-based threat* associations.

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**Jennifer S. Hunt, *Race, Ethnicity, and Culture in Jury Decision Making*, 11 Annu. Rev. Law Soc. Sci., 269-88 (2015).**

- This article reviews a growing body of social science research indicating that race, ethnicity, and culture can influence the judgments and behaviors of juries.

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- Research on jury bias shows that jurors often make harsher judgments of defendants from other racial and ethnic groups and are more likely to give death sentences in cases involving Black or Latino defendants and white victims.
- Juror bias often involves subtle or implicit psychological processes that can be difficult to recognize and correct. Jurors' judgments and behaviors may reflect their racial, ethnic, and cultural backgrounds. Juror's backgrounds may influence their reactions to defendants, trial judgments, and deliberation behaviors.

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**Cynthia J. Najdowski, Bette L. Bottoms & Phillip Atiba Goff, *Stereotype Threat and Racial Differences in Citizens' Experiences of Police Encounters*, 39 *Law and Human Behavior* 463 (2015).**

#### **Purpose**

- To test the hypothesis that Blacks, but not whites, experience stereotype threat in police encounters as concern about being perceived as guilty for crimes not committed.
- "Stereotype threat is the concern one experiences when at risk of being perceived in light of a negative stereotype that applies to one's group."
- Study 1 also tests whether gender is associated with the level of stereotype threat individuals report experiencing in police encounters.

#### **STUDY 1**

##### **Methodology**

- Participants were 49 Black (37% men) and 184 white (52% men) undergraduate psychology students.
- Completed a self-report survey assessing their experiences of police-related stereotype threat, e.g. "I worry that police officers might stereotype me as criminal because of my race." Responses were given on a 7-point scale ranging from "strongly disagree" to "strongly agree."

##### **Results:**

Blacks were significantly more likely than whites to agree that they experience stereotype threat in police encounters. Whereas both white men and white women significantly disagreed that they experienced stereotype threat in police encounters, Black women neither significantly disagreed nor agreed, and Black men significantly agreed.

#### **STUDY 2**

# Empirical Studies:

## Implicit Racial Bias in the Criminal/Juvenile Legal Systems

### Methodology

- Participants were 79 Black and 100 white men from two samples: (a) undergraduate psychology students and (b) from contexts where students were likely to be (e.g. on campus).
- Researchers asked participants to imagine that they were experiencing a very specific hypothetical police encounter where the officer is in close proximity to and sees the participant.
- Participants were given the four self-report studies:
  - The same from Study 1.
  - A survey assessing their anticipated anxiety in the hypothetical police encounter.
  - A survey assessing participants anticipated self-regulatory efforts (e.g. “I would deliberately pay attention to how I was acting,” and “I would be self-conscious about how I looked.”).
  - A survey assessing anticipated suspicious behavior by asking participants to think about how they would act in the hypothetical encounter (e.g. “look nervous,” “try to avoid looking nervous,” “avoid making eye contact”).
- Stereotype activation was tested by showing eight stereotype-related words (i.e. criminal, guns, drugs, gangs) with two or three letter spaces omitted (e.g. \_R \_ \_INAL) paired with 13 filler (non-stereotype) words. Participants were asked to complete the task quickly with the first word that came to mind. (e.g. CRIMINAL vs ORIGINAL).
- Participants’ open-ended responses about their expectations of the officer’s actions, their expectations about being accused, and their spontaneous reactions imagined in the encounter were coded and measured for stereotype threat activation.

### Results

- Stereotype threat would lead Black men, but not white men, to expect to engage in more self-regulatory efforts, and, in turn, behave in ways that are interpreted as suspicious by police.
- When imagining a police encounter, Black men are significantly more likely than white men to anticipate feeling anxious, engage in self-regulatory efforts and, ironically, behave in ways that police have been shown to perceive as deceptive or suspicious.
- This racial difference appears even when all participants envision the same kind of police encounter in terms of how likely it would have been for the police officer to confront them or target them as suspects.

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#### Relevance

- Black men (compared to white men) are uniquely concerned about being evaluated by police in light of the Black criminal stereotype. This leads Black men to be more anxious, increasing the likelihood that they will behave in ways that police perceive as suspicious.
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**Jason Okonoua & Jennifer Eberhardt, *Two Strikes: Race and the Disciplining of Young Students*, *Psychological Science* 26:5 (April 8, 2015).**

#### STUDY 1

##### Purpose

- To examine how student race influences the harshness of a teacher's response to minor classroom misbehavior.

##### Methodology

- 53 practicing teachers were shown school records for students, who each committed the same one or two minor infractions in the classroom. No photos of the students were shown to the teachers, but the files teachers were given had stereotypically Black or white names.
- Teachers were asked how troubled they would feel about each of the infractions and how severely they would punish each infraction. They were then asked how likely they would be to label the student a troublemaker.

##### Results

- Teachers did not feel significantly troubled by the first infraction regardless of the student's race, but felt significantly more troubled by the second infraction when the student was Black.
- Teachers did not show significant differences in the level of discipline for first infraction regardless of the student's race, but after the second infraction than the white student teachers felt the Black student should be disciplined more severely.
- Teachers were more likely to label the Black student as a troublemaker.

##### Relevance

- Negative stereotypes of Black students make it more likely that teachers will view repeated classroom infractions as severe and lead to harsher discipline for Black students compared with white students.

#### STUDY 2



## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Purpose

- To measure the extent to which teachers believed classroom infractions were a pattern of misbehavior and whether there was a relationship between a teacher's perception of the pattern, race, and discipline.

#### Methodology

- 191 teachers were shown school records for students, who each committed the same one or two minor infractions in the classroom. No photos of the students were shown to the teachers, but the files teachers were given had stereotypically Black or white names.
- Teachers were asked whether the student's behavior was indicative of a pattern and how likely they would be to suspend the student in the future.

#### Results

- No significant difference in feeling troubled was indicated for the first infraction regardless of race, however teachers showed a sharper increase in feeling troubled from the first infraction to the second when the student was Black.
- There was no racial effect on discipline for the first infraction, but there was a significant racial effect for the second infraction, with teachers believing Black students should be more severely punished for the second infraction.
- Black student's misbehavior was more likely to be perceived by teachers as indicative of a pattern.
- Teachers were more likely to believe they would recommend suspending the Black student compared to the white student.

#### Relevance

- Racial disparities can occur even when being disciplined for the same behavior. This has implications in the school context and for repeat offenders in the criminal justice system.
- A teacher's disparate reaction to similar behaviors by students from different racial groups may cause repeated misbehavior.
- The Black-escalation effect is exemplified by racial disparities in school suspension rates. Disparities are even starker in cases where students have been suspended two or more times.

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**Phillip Atiba Goff et al., *The Essence of Innocence: Consequences of Dehumanizing Black Children*, 106 J. Personality & Soc. Psychol. 526 (2014).**

# Empirical Studies:

## Implicit Racial Bias in the Criminal/Juvenile Legal Systems

### STUDY 1

#### Purpose

- To determine the extent to which we dehumanize Black children, testing the following hypotheses:
  - That Black boys are seen as less “childlike” than their white peers,
  - That the characteristics associated with childhood will be applied less when thinking specifically about Black boys relative to white boys, and;
  - That these trends would be exacerbated in contexts where Black males are dehumanized by associating them (implicitly) with apes.

#### Methodology

- 123 students from a public university participated in the study, 96% of which were female.
- Participants were asked a series of questions about how innocent children were in general without specifying race and how innocent white and Black children were.

#### Results

- For every age group after the age of 9 (i.e., 10 –13 through 22–25), Black children and adults were rated as significantly less innocent than white children and adults or children and adults generally. The analyses revealed no differences in ratings of innocence between white people and people generally, either within an age group or overall.

#### Relevance

- Supports the proposition that the general population sees Black children as less innocent than white children.

### STUDY 2

#### Purpose

- To examine whether perceptions of innocence differed by target race and the severity of crimes committed.
- To examine whether dehumanization contributes to the perception of Black children as less innocent.

#### Methodology

- 59 students from a large public university participated.
- Participants were shown a series of pictures of white, Black or Latino children and were asked to estimate the child’s age, culpability, the attitude of the participant

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about Black people, and asked to take an IAT.

#### Results

- Participants overestimated the age of Black felony suspects to a greater degree than that of Black misdemeanor suspects. There was no difference in age errors between white suspects, nor between Latino suspects.
- Participants rated Black felony suspects as older than white felony suspects or Latino felony suspects, but revealed no such effects for misdemeanor suspects.
- Black felony suspects were seen as 4.53 years older than they actually were, this would mean that boys would be misperceived as legal adults at roughly the age of 13 and a half.
- Black people were rated as more culpable than Latinos, and Latinos were rated as more culpable than white people.
- Black felony suspects were viewed as significantly more culpable than either white felony suspects or Latino felony suspects.
- A simple correlation found that age errors were moderately related to ratings of culpability such that the older a child was rated, the more culpable the child was seen to be
- The dehumanization IAT significantly predicted age overestimations of Black children. The more readily participants implicitly associated Black people with apes, the higher their age overestimation for both Black misdemeanor suspects and Black felony suspects.
- The dehumanization IAT significantly predicted perceptions of the culpability of Black children. The more readily participants implicitly associated Black people with apes, the higher their culpability ratings for both Black misdemeanor suspects.
- Implicit anti-Black dehumanization predicted ratings of white culpability in that the more participants associated apes with Black people, the less they found white targets culpable for criminal misdeeds.

#### Relevance

- Black children are seen as older and more culpable than their counterparts.

#### STUDY 3a

##### Purpose

- To establish if implicit dehumanization facilitates racial disparities in real-world policing contexts.

##### Methodology

- 60 police officers from a large urban police department participated.
- Used the same methodology as Study 2.

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#### Results

- Participants overestimated the age of Black felony suspects to a greater degree than that of Black misdemeanor suspects, as well as all other suspects.
- White targets were rated as less culpable when associated with felonies, whereas Black targets were rated as significantly more culpable when associated with felonies. There was no difference in culpability for Latinos across crime type.
- There was a difference between white targets suspected of felonies and both Black targets and Latino targets. No differences emerged between Black and Latino felony suspects or between any misdemeanor suspects.
- The older an officer thought a child was, the more culpable that child was rated for their suspected crime.
- The more quickly participants associated Black people with apes, the higher was their age overestimation for both Black misdemeanor suspects and Black felony suspects.
- The dehumanization IAT significantly predicted perceptions of the culpability of Black children. The more readily participants implicitly associated Black people with apes, the higher were their culpability ratings for both Black misdemeanor suspects and Black felony suspects.
- Implicit dehumanization of Black people was a significant predictor of racial disparities in the use of force against child suspects, even controlling for other measures of bias. The more officers implicitly associated Black people with apes, the more officers had used force against Black children relative to children of other races.

#### Relevance

- Police officers are also subject to dehumanizing Black youth.

#### STUDY 3b

##### Purpose

- To replicate the findings of Study 3a with a larger sample size.

##### Methodology

- 116 police officers from a large police department participated in the study.
- Participants completed the ATB Scale, the personalized IAT, and the dehumanization IAT. Participants then completed a survey regarding children, age, race and culpability.

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#### Results

- Results were the same as found in Study 3a.

#### Relevance

- See Study 3a.

#### STUDY 4

#### Purpose

- To establish if the presence of dehumanizing associations contributes to the racial disparities in the juvenile justice system.

#### Methodology

- 82 students from a large public university participated.
- Participants were primed with names of apes or of great cats.
- Participants were then asked to complete an “essentialism scale” to determine whether a population views social categories as essentialized. The scale was accompanied by a picture of a Black or white child to focus the survey taker on Black or white children.
- Participants were then asked to read crimes scenarios and to conduct an age and culpability assessment.

#### Results

- White children were seen as a more essentialized group than were Black children.
- The ape prime led to lower ratings of Black childhood essentialism than did the cat prime, whereas prime had no effect on the essentialism ratings of white children.
- Black targets were perceived as older than were white targets.
- After an ape prime, participants underestimated white suspects’ age when they were suspected of a felony relative to a misdemeanor, whereas Black suspects had significantly greater age overestimations when suspected of a felony relative to a misdemeanor.
- Black targets were perceived as more culpable than were white targets.
- Targets were seen as more culpable after participants were primed with apes than after they were primed with great cats.
- Similar to the patterns of age overestimation, implicit dehumanization was associated with an increased culpability gap between felony and misdemeanor suspects for Black people but was associated with the opposite for white people, leading to the perceptions of reduced culpability for white children.
- The study found a moderately strong relationship between age errors and ratings of culpability such that the older participants rated a target, the more culpable they were rated for their suspected crimes.

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- Perceptions of essentialism fully explain the effect of the ape prime on the age overestimations of Black felony suspects.

#### Relevance

- This study offers more proof that Black children are not equally “afforded the privilege of innocence—resulting in violent inequalities.”

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**Rachel D. Godsil & Alexis McGill, *Transforming Perception: Black Men and Boys*, American Values Institute, (2013).**

#### Purpose

- To understand how the brain can alter perceptions, alter behavior effects of bias, and reduce bias.

#### Methodology

- This report synthesizes recent developments in psychology and neuroscience to better understand the complex reactions and effects of racial bias, especially as it relates to Black boys and men.

#### Results: Impact of Implicit Racial Bias

- Studies of news networks in 1996 showed that Blacks were overrepresented in coverage associated with poverty. Other studies found that at both national and local levels Black criminality is over-portrayed. Persistent portrayals of Blacks in the media as being associated with negative characteristics reinforce and perpetuate harmful racial stereotypes.
- Studies in the 80s and 90s found that prosecutors were more likely to prosecute Black defendants. A study conducted in 2000 found that prosecutors tended to offer white defendants more generous plea deals. Capital punishment also exhibits racial bias in that Black defendants convicted of killing white victims are more likely to receive death sentences.
- Numerous studies have shown Black boys suffer from the effects of implicit bias within the education system through increased likelihood of suspension, higher dropout and incarceration rates. In higher education contexts, college admissions decision-makers weigh GAP and SAT scores differently for students based on race. Employers also exhibit implicit bias through candidate selection for interviews, during interviews, and in hiring decisions.
- Racial disparities in provision of medical care have also been documented. Studies show that Black patients receive poorer quality care for cancer treatment,

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- cardiovascular disease, transplants, pain management, and children's medicine to name a few. Doctor-patient communication and interactions are also stymied by racial bias.
- Racial anxiety is experienced by different identity groups of people in various contexts. Black men and boys for example may feel anxiety about being subject to discrimination or hostile treatment. White people may experience anxiety over being perceived as racist. Racial anxiety has been shown to negatively impact one's physical and psychological health. Police officers experiencing racial anxiety are more at risk of using excessive force than explicitly racially biased police officers.
  - Stereotype threat or anxiety about negative stereotypes can cause changes in the body and brain that impact performance because cognitive resources are diverted that may otherwise be used toward completing a task, such as a standardized test.

#### Results: Reducing Bias or Anxiety

- Research has shown that exposing people to repeated positive images (counter-stereotypes), such as positive role models or comforting settings, can decrease implicit bias.
- Increasing inter-group contact between races in communities, schools and workplaces can also affect the incidence of implicit bias and in-group preference. Diverse juries for example, have more discussion on race-related topics and create an environment where white jurors are less likely to believe after conclusion of the case that a Black defendant was guilty.
- Racial anxiety within police departments and schools can be mitigated through institutional interventions.
- In diverse environments, group membership tends to become less defining of individual identity.
- Culture can be shifted and space created for inter-group empathy by providing more accurate portrayals of Black men and boys in mainstream media and challenging negative stereotypes through the use of positive counter-narratives.

#### Relevance

- Categorization of people based on visual and aural perceptions influence what people pay attention to and what they remember, which can have profound implications for individuals in education, employers, and interactions with the justice system.



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Anita Rattan, Cynthia S. Levine, Carol S. Dweck, Jennifer L. Eberhardt, *Race and the Fragility of the Legal Distinction Between Juveniles and Adults*, PLOS ONE 7(5)(2012).

#### Purpose

- This study examined whether white Americans—a group overrepresented in jury pools, the legal field, and the judiciary— would perceive juvenile status as a mitigating factor to the same degree when primed to think of Blacks versus whites. In other words, the study asked whether race influences the extent to which juveniles are viewed as less culpable than adults and, as a result, the support for a punitive policy directed at them.

#### Methodology

- A nationally-representative sample of 735 white Americans participated (347 males, 388 females, mean age = 50.47, SD = 16.51). Participants reviewed materials detailing that life without parole sentences for juveniles in non-homicide cases were currently under review by the Supreme Court. Embedded in the materials, participants read about a 14-year-old male with 17 prior juvenile convictions on his record who raped an elderly woman, one of the two cases that the Supreme Court selected as representative for review in order to determine the constitutionality of these sentences generally. Researchers manipulated one word in the passage about the rape—the race of the assailant—describing him as either Black or white.
- Dependent Variables: Participants were asked to rank their support of life without parole for juveniles when no victim had been killed (i.e. not at all “1” – extremely “6”). They were also asked to rank how much juveniles who committed the same crime as adults should be seen as less blameworthy (i.e. juveniles are less blameworthy than adults “1” – juveniles and adults are equally blameworthy “6”).
- Control Variables: Participants were asked to rank their feelings towards both white and Black Americans (i.e. “0” unfavorable feeling - “100” very warm feeling). They were also asked to rank their political affiliation (i.e. strong republican “1” – strong democrat “7”) and ideology extremely liberal (i.e. “1” – extremely conservative “7”) which were used to create a political attitudes composite. Finally, participants were asked about the race of the assailant from the previous passage; those who incorrectly recalled his race were excluded from the analysis.

#### Results

- Researchers found that participants in the Black prime condition expressed significantly more support for life without parole sentences for juveniles in non-homicide cases than did those in the white prime condition. Similarly, participants in

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the Black prime condition perceived juveniles as more similar to adults in blameworthiness, than participants did in the white prime condition.

- Additionally, the degree to which participants broke down the established legal boundary between juveniles' and adults' culpability (applying a more adult standard of blameworthiness when the crime was associated with Black) accounted for their greater support for juvenile life without parole sentences in the Black prime condition.

#### Relevance

- These results indicate that the association of egregious or heinous crime with Black youth versus white youth can affect both policy support for harsh juvenile sentences and perceptions of juveniles' culpability relative to adults.

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**Vanessa Edkins, *Defense Attorney Plea Recommendations and Client Race: Does Zealous Representation Apply Equally to All?*, 35 Law & Hum. Behav. 413 (2011).**

#### Purpose

- To determine whether the disparity between plea recommendations attorneys give to Black and white clients will arise from some form of bias on the part of the defense attorney, rather than a logical reaction to the recognition that the system is unjust.

#### Methodology

- Members of the Florida Association of Criminal Defense Lawyers were asked to read a case describing a robbery at a jewelry store. The case was split into three parts: *The Crime*, *Suspect*, and *Evidence*. The section depicting the crime was uniform across all conditions. Race was manipulated in the description of the suspect; strength of evidence was manipulated in the last part of the case summary
- Participants were presented with a list of 12 factors that may be associated with a case, and indicated on a seven-point Likert scale (Completely unimportant to Completely important) how important each was in determining whether or not they would advise their client to consider accepting a plea.
- Attorneys were also asked to indicate how certain they are about the client's actual guilt.

#### Results

- Consistent with previous research, attorneys rated likelihood of conviction and severity of sentence as the most important factors in their decision to advise a client

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- to consider a plea bargain. The impression that their client may not present well to a jury was a close third.
- Practicing defense attorneys displayed a tendency to recommend plea bargains for African Americans that were longer than those that they would recommend for Caucasian clients. Pleas attorneys felt they could obtain with a minority client contained higher sentences than those they felt they could obtain with a Caucasian client and were significantly more likely to include some jail time.
  - Reasons for the disparate recommendations were not due to increased perceptions of guilt with the minority client (i.e., no signs of explicit bias) nor to perceptions that the minority client would fare worse at trial (i.e., not owing to belief that system/jurors will be worse to Black clients).
  - Therefore, evidence suggests that the **defense attorneys'** own personal biases are inflating the recommendations given to the African American client.
  - Note: Years practicing had the strongest effect showing that for every year the attorney has practiced, the odds of recommending a plea that includes jail time increased.

#### Relevance

- Even if defense attorneys truly believe that they can zealously represent their clients and put aside all personal biases, unconscious racism or implicit bias may still be a factor.

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**Jeffrey J. Rachlinski et al., *Does Unconscious Racial Bias Affect Trial Judges?*, 84 Notre Dame L. Rev. 1195 (2009).**

#### Purpose

- To determine if trial judges are affected by implicit bias.

#### Methodology

- 133 judges from 3 jurisdictions participated in the study, diverse in terms of gender and race.
- Judges were asked to complete a race Implicit Association Test (IAT), two hypothetical vignettes in which the race of the defendant was not explicitly identified but was subliminally primed; and another hypothetical vignette in which the race of the defendant was made explicit.

#### Results

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- The IAT demonstrated a strong white preference in white judges, while the Black judges exhibited no preference overall.
- When a judge was primed with words associated with Black people, the decision regarding disposition of a respondent correlated with their IAT scores. Judges who exhibited a white preference on the IAT gave harsher sentences to respondents when they had been primed with Black-associated words than with neutral words, whereas judges who exhibited a Black preference on the IAT gave less harsh sentences when they had been primed with Black-associated words than with neutral words.
- When the race of the respondent and the victim were made explicit, IAT scores predicted nothing among the white judges. Among the Black judges, however, a Black preference on the IAT was associated with a willingness to acquit the Black defendant.

#### Relevance

- Judges, like the rest of us, carry implicit biases concerning race.
- These implicit biases can affect judges' judgment, at least in contexts where judges are unaware of a need to monitor their decisions for racial bias.
- When judges are aware of a need to monitor their own responses for the influence of implicit racial biases, and are motivated to suppress that bias, they appear able to do so.

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**Sophie Trawalter et al., *Attending to Threat: Race-Based Patterns of Selective Attention*, 44 J. Experimental Soc. Psychol. 1322, 1322 (2008).**

#### STUDY 1

##### Purpose

- To investigate whether the association between Black men and threat would result in biased patterns of selective attention, such that Black male targets would capture the attention of white social perceivers more than white male targets.
- To determine whether the stereotypical association between young Black men and danger become so robust that photographs of Black men are attentionally privileged, similar to other threatening stimuli (e.g., spiders, snakes, angry faces).

##### Methodology

- 24 white college students participated in the study.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Participants underwent a dot-probe task that juxtaposed faces of Black men and white men. In the dot-probe task, participants must detect the location of a probe that is initially hidden from view behind one of two stimuli that are simultaneously presented on a computer screen, but subsequently revealed when the two stimuli disappear. A short response latency to detect the probe suggests that participants' attention had been oriented, albeit sometimes unconsciously, to the stimulus that previously obscured it. By contrast, a relatively long response latency suggests that participants' attention had been oriented to the stimulus that had not obscured the probe.

#### Results

- The results provide preliminary evidence that white perceivers initially attend to Black rather than white male targets that are presented without their awareness.
- Participants did reveal a pro-Black attentional bias in the first half of the task (32 critical trials), consistent with predictions and with the mountain of evidence that young Black men are stereotypically associated with violence and danger.

#### Relevance

- More empirical evidence that Black men garner more attention than white males and are associated with crime on a subconscious level.

### STUDY 2

#### Purpose

- To examine the extent to which researchers could attenuate the attentional bias effect by reducing the threat value of the Black male targets.

#### Methodology

- 24 white college students participated.
- Because direct eye contact may be associated with threat and interacts with race to create a heightened "threat" to observers and therefore creates an exaggerated attentional bias, researchers exposed subjects to images in which the subjects' gaze was averted in a similar dot-probe task as described in Study 1.

#### Results

- Participants revealed a significant attentional bias for Black faces with direct eye-gaze, but not for Black faces with averted eye-gaze.

#### Relevance

- Provides further evidence that Black males are implicitly associated with threat.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

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**Phillip Atiba Goff et al., *Not Yet Human: Implicit Knowledge, Historical Dehumanization, and Contemporary Consequences*, 94 J. Personality & Soc. Psychol. 292, 302 (2008).**

#### STUDY 1

##### Purpose

- To test the hypothesis that there is an implicit association between Black people and apes and to establish how widely that implicit association is held.

##### Methodology

- 121 male undergraduates participated in the study.
- Participants were subliminally primed with Black faces, white faces, or a nonface control image. Next, they were presented with degraded images of animals (line drawings of apes and non-apes), which they were asked to identify as quickly as possible. For each animal, image quality was improved in small increments (frame by frame), making the animal increasingly easy to identify. For both white and non-white study participants, researchers predicted that exposure to the Black male faces would facilitate identification of the ape images, whereas exposure to the white male faces would not.

##### Results

- Simple exposure to Black faces reduced the number of frames participants required to accurately identify ape images. This Black–ape facilitation effect was observed among white and non-white participants alike. And this effect was not moderated by participants' explicit racial attitudes or their motivation to control prejudice. Surprisingly, participants not only exhibited a Black–ape facilitation effect but also exhibited a white–ape inhibition effect as well.

#### STUDY 2

##### Purpose

- To establish if priming participants with apes would result in an attentional bias to Black faces, establishing that Black people and apes are bi-directionally associated.

##### Methodology

- Participants were presented with two faces on the computer screen simultaneously (one Black and one white face). These faces disappeared, and a dot probe appeared

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

in the place where one of the faces used to be. The participant was asked to locate the dot probe as quickly as possible on the computer and to use one of two response keys to indicate whether it was on the left or the right of a centered focus dot. Researchers used the time it took participants to locate the dot probe as a proxy for visual attention. Researchers predicted the participants would be especially fast at finding the dot probe when it was in the location of the Black face and they had been primed with apes.

#### Results

- When white participants were not primed, they appeared to display an in-group preference—that is, their attention was directed to white faces more so than Black faces. When subliminally primed with ape images, however, Black faces captured their attention.

#### STUDY 3

##### Purpose

- To test whether the bias shown associating apes and Black faces in the previous two studies had to do with out-group bias rather than a subconscious association between Black people and apes.

##### Methodology

- 49 white male college students participated.
- Participants were presented with the same dot-probe task as in Study 2. They were presented, however, with a Black male face and an Asian male face (rather than Black and white faces). Second, to ensure that any arresting properties of color were removed, the faces were converted to line drawings. Again, it was hypothesized that participants' attention would be diverted to the Black male face when primed with apes. However, in the absence of an ape prime, given the lack of an in-group member, it was hypothesized that participants' attention would be equally distributed.

##### Results

- The attentional bias toward Black faces observed in the ape-prime condition did not appear to be driven by a generalized out-group bias. Rather, results indicated an association between Black people in particular and apes that is determining where people look.

#### STUDY 4

##### Purpose



## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- To test whether the Black–ape association is driven by implicit anti-Black attitudes or explicit knowledge of the association rather than by implicit knowledge.

#### Methodology

- 69 white male college students participated.
- Participants took two modified Implicit Association Tests. Half the participants were randomly assigned to first take a personalized IAT (Olson & Fazio, 2004). The other half first took an IAT that required them to categorize stereotypically Black and white names by race at the same time they categorized animal names as either great apes or big cats. After completing one or the other IAT, participants left the lab and returned no less than 24 hours later to complete the second IAT (*i.e.*, whichever IAT they had not taken previously).

#### Results

- As predicted, participants were faster to categorize target words when *Black* was paired with *ape* than when *Black* was paired with *feline*. This bias toward pairing *Black* and *ape* was virtually unchanged when covarying for participants' scores on the personalized IAT, indicating that individuals' implicit anti-Black bias was not responsible for the Black–ape association.

### STUDY 5

#### Purpose

- To establish if the activation of the association between Black people and apes in contemporary society lead people to condone violence against Black targets, despite individual differences in anti-Black prejudice?

#### Methodology

- 121 white male college students participated.
- Researchers subliminally primed participants with words associated with apes or big cats, and were asked them to view a videotape of a group of police officers beating a suspect whom the participants were led to believe was Black or white. Researchers predicted that the participants primed with the ape words would be the most likely to condone violence directed at the suspect, but only when they thought the suspect was Black.

#### Results

- Participants who believed the suspect to be white perceived the police as no more justified in using violence when primed with apes than when primed with big cats. However, participants who believed the suspect to be Black perceived the police as more justified in using violence when they had been primed with apes.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Participants who had been primed with big cats did not think the police more justified in beating the white or the Black suspect, participants who were primed with apes thought that the police were more justified in beating the Black suspect than the white suspect.

#### STUDY 6

##### Purpose

- To examine whether metaphorical representations comparing Black people to apes in the public media impacts the way people conceive Black people and issues surrounding Black people.

##### Methodology

- Researchers examined death-eligible cases between 1979 and 1999 in Philadelphia, Pennsylvania. From this data set, they extracted 153 cases for which we had both mug shots of the defendant and press coverage of the case in the *Philadelphia Inquirer*.
- Each article was coded for the presence of 54 words that connoted bestial or subhuman qualities. The words were presented to raters who read each word in context (taken from sentences in the newspaper articles). Raters were asked to “think of an animal” that was associated with the target word in each sentence, in order to establish the presence of words associated with apes.
- Each death-eligible case was then given a score for the total number of ape words used to describe it in the press and a score for the total number of articles that covered the case.

##### Results

- Black defendants were described in the press with more ape-relevant words than were white defendants.
- When controlling for the total number of articles, defendant socioeconomic status, victim socioeconomic status, aggravating circumstances, mitigating circumstances, and crime severity, Black defendants who were put to death were more likely to have apelike representations in the press than were those whose lives were spared.

##### Relevance

- Establishes that in the press an association is drawn between Black people and apes; and explains the impact of this dehumanization on the tolerance for and seeking of punishment.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

Jennifer L. Eberhardt, Paul G. Davies, Valerie J. Purdie Vaughns, & Sheri Lynn Johnson, *“Looking Deathworthy: Perceived Stereotypicality of Black Defendants Predicts Sentencing Outcomes”* (2006).

#### STUDY 1

##### Purpose

- To examine whether suspects with stereotypically Black features influence juror’s death sentencing decisions in cases with white victims.

##### Methodology

- Photos of 44 Black male defendants convicted of murdering white victims in Philadelphia between the years of 1979 and 1999. The photos were presented to 51 Stanford undergraduate students who were unaware the photos were of convicted murderers. Students were asked to rate the features of each photo on a scale from not at all stereotypical to extremely stereotypical.
- Researchers then took this data and analyzed it in conjunction with six nonracial factors known to influence sentencing including: aggravating and mitigating circumstances, severity of the murder, defendant’s and victim’s socioeconomic status, and defendant’s attractiveness.

##### Results

- Defendants convicted of killing a white victim, whose appearance was perceived as more stereotypically Black, were more likely to receive death sentences.

##### Relevance

- A Black defendant, with more stereotypically Black features, convicted of killing a white victim is more likely to be sentenced to death.

#### STUDY 2

##### Purpose

- To examine whether suspects with stereotypically Black features influence juror’s death sentencing decisions in cases with Black victims.

##### Methodology

- Photos of 118 Black male defendants convicted of murdering Black victims in Philadelphia between the years of 1979 and 1999. The photos were presented to 18 Stanford undergraduate students who were unaware the photos were of

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- convicted murderers. Students were asked to rate the features of each photo on a scale from not at all stereotypical to extremely stereotypical.
- Researchers then took this data and analyzed it in conjunction with six nonracial factors known to influence sentencing including: aggravating and mitigating circumstances, severity of the murder, defendant's and victim's socioeconomic status, and defendant's attractiveness.

#### Results

- Defendants convicted of killing a Black victim, whose appearance was perceived as more stereotypically Black, were not more likely to receive death sentences.
- Defendant's whose features were perceived as more stereotypically Black were more likely to be sentenced to death only if their victim was white.

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**Kurt Hugenberg & Galen V. Bodenhausen, *Ambiguity in Social Categorization: The Role of Prejudice and Facial Affect in Race Categorization*, 15 Psychol. Sci. 342 (2004).**

#### STUDY 1

##### Purpose

- To test if racial bias resulted in people identifying racially ambiguous faces as African American when they were making hostile faces, but as Caucasian when they were making happy faces.

##### Methodology

- 20 white university students participated.
- Participants were shown a series of racially ambiguous computer-generated faces and were asked to categorize each target as either Caucasian or African American. Each of the 15 faces was presented twice: once with a clearly happy facial expression and once with a clearly angry facial expression. Participants then completed measures of their explicit attitudes toward Caucasians and African Americans and finally completed an implicit association task.

##### Results

- The study found that the relationship between prejudice and categorization as African American was most strongly related when the faces were making a hostile expression, and much less likely to categorize as African American when making a happy face.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Relevance

- Biased people, both implicit and explicitly so, associate Blackness with hostility.

#### STUDY 2

#### Purpose

- To replicate and extend the findings of Study 1.

#### Methodology

- Same as Study 1, but 57 white university students participated.
- The implicit and explicit biases were measured in a separate session, and the study included not only a speed dichotomous categorization test but also a non-speed categorization task.

#### Results

- “As implicit prejudice increased, categorization decisions were more powerfully influenced by targets’ facial affect.”

#### Relevance

- “Blackness” is associated with perceived hostility, which works bi-directionally in terms of interpreting ambiguous behavior as hostile when faced with a person raced as Black, while also more likely to identify someone as Black when we interpret behavior as hostile.

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**Theodore Eisenberg & Sheri Lynn Johnson, *Implicit Racial Attitudes of Death Penalty Lawyers*, 53 DePaul L. Rev. 1539 (2004).**

#### Purpose

- To establish the extent to which capital defense attorneys are affected by implicit biases.

#### Methodology

- Administered a paper version of the IAT to habeas lawyers, capital defense trial lawyers, and law students.

#### Results

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Results in this population mirrored the results found in the general population, indicating that capital defense attorneys are affected by implicit bias just like everyone else.

#### Relevance

- Defense attorneys are also affected by implicit bias, despite explicit commitment to egalitarian values.
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**Sandra Graham & Brian S. Lowery, *Priming Unconscious Racial Stereotypes About Adolescent Offenders*, 28 Law & Hum. Behav. 483 (2004).**

#### STUDY 1

##### Purpose

- To illustrate how unconscious racial stereotypes affect police officers in their interactions with juvenile offenders.

##### Methodology

- 105 ethnically diverse police officers participated in the study.
- The officers were initially primed with words related to the category *Black* or neutral with respect to ethnicity. Then they were asked to read a police report in which the ethnicity of the defendant was not given in two scenarios in which the circumstances of low-level offense property and assault crimes were given. They were then asked a series of questions about their impressions of the alleged suspect, inferences about suspect culpability and likelihood of reoffending, and judgments about how they would handle the situation if they were called to the scene.

##### Results

- Police officers in the race prime condition were less likely to judge the offender as immature (by virtue of adolescence) and more likely to perceive him as culpable and deserving of punishment.
- In contrast, consciously held beliefs and attitudes about race did not influence attribution-related judgments, suggesting that researchers were successful in activating implicit racial bias outside of the respondent's conscious awareness.

##### Relevance

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Police officers are affected by implicit bias, which has a deep impact on the juvenile justice system as they have wide discretion regarding the involvement of a youth in the juvenile justice system to begin with.

#### STUDY 2

##### Purpose

- To study the effect of implicit bias on probation officers in their interactions with juvenile offenders.

##### Methodology

- Researchers repeated the methodology used in Study 1 with police officers, however changed the options for punishment severity to be options available to probation officers.

##### Results

- Probation officers in the race prime condition judged the alleged offender to be less immature and more violent, and their global trait ratings were more negative. Those primed with the racial category also viewed the offender as more culpable, more likely to reoffend, and more deserving of punishment.
- Consciously held racial attitudes had negligible effects on attribution-related judgments about hypothetical adolescent offenders.

##### Relevance

- Probation officers are affected by implicit bias.

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Jennifer L. Eberhardt et al., *Seeing Black: Race, Crime, and Visual Processing*, 87 J. Personality & Soc. Psychol. 876, 886 (2004).

#### STUDY 1

##### Purpose

- To test whether stereotypes about certain groups are “bidirectional”—*i.e.*, that is not only that thinking of a stereotyped group “Black Americans” conjures up ideas about crime, but also that thinking about crime conjures up images of Black Americans.
- Study 1: to establish that exposure to Black faces can decrease the perceptual threshold for recognizing crime-relevant objects.



## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- Subjects were 41 white male UC- Berkley and Stanford students.
- Subjects were primed with 50 Black male or 50 white male faces, and then asked to complete an “unrelated” task of looking at objects, both crime-related and neutral, on a computer screen that initially were severely degraded and became less degraded in small increments (in 41 picture frames). The participants’ task was to indicate (with a button push) the moment at which they could detect what the object was.

#### Results

- In comparison with white face primes, Black face primes dramatically reduced the number of frames needed to accurately detect crime-relevant objects, and exposure to Black primes facilitated the detection of crime-relevant objects compared with the no-prime condition. In contrast, exposure to white primes inhibited the detection of crime-relevant objects compared with the no-prime condition. As predicted, there was no significant effect of race prime on crime-irrelevant objects.

#### Relevance

- People are more likely to see “crime-related” objects when associating the object with a Black face than with a white face.

#### STUDY 2

##### Purpose

- To examine the extent to which the association between Black people and crime would produce an attentional bias toward Black male faces.

##### Methodology

- 52 white male Stanford students participated.
- Researchers activated the concept of crime by subliminally priming participants with crime-relevant objects. Immediately following this priming procedure, participants were introduced to the dot-probe task. During this task, two faces (one Black and the other white) were simultaneously displayed on the computer screen. These faces quickly disappeared and were replaced by a dot probe in the visual location of either face. The participants’ task was to locate the dot probe as quickly as possible.

##### Results

- When the dot probe was in the Black face location, participants primed with the crime-relevant images were found the dot faster than participants who were not

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

primed. Whereas, when the dot was in the white face location, the crime prime caused the dot detection to be slower than those who had not been primed.

#### Relevance

- This study further supports that stereotypes associate Black people with crime subconsciously.

#### STUDY 3

##### Purpose

- To test whether attentional biases stayed consistent even when the content of the prime was positive associations with Black faces.

##### Methodology

- Participants were 75 white male Stanford students.
- Participants were primed with words associated with basketball, and then two faces (one Black and the other white) were simultaneously displayed on the computer screen. These faces quickly disappeared and were replaced by a dot probe in the visual location of either face. The participants' task was to locate the dot probe as quickly as possible.

##### Results

- Though participants showed no significant attentional bias toward either face when they were not primed, they were significantly faster to find the dot in the Black face location than in the white face location when primed with basketball-relevant words. However, priming did not negatively affect the speed at which the dot was located behind the white faces as compared to no-prime.
- The participants also were screened for explicit bias, and differences in explicit racial attitudes did not affect the results.

##### Relevance

- Stereotypic associations other than crime can lead to visual tuning effects.

#### STUDY 4

##### Purpose

- To test whether stereotypical associations may cause police officers' attention to linger on a Black face when primed with words associated with crime, how attentional bias affects the memory of faces displayed, and to establish if stereotypes cause peoples' memories to remember faces as more "stereotypically Black" when primed with words associated with crime.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- 57 police officers practicing in an urban area volunteered to be part of the study.
- Police officers were primed with words associated with enforcing the law against violent criminals. 10 faces, 5 Black and 5 white, were rated by another group for “stereotypicalness.” The participants were then asked to participate in a dot-probe task.
- After performing the dot-probe task, participants were given the surprise face-recognition memory task. Participants were exposed to a Black face lineup and a white face lineup. For each lineup, participants were asked to identify the face that had been displayed during the dot-probe task. For each lineup, all five faces of one race—the target and four distracters— were presented on the computer screen simultaneously. The order in which participants saw the Black and white lineups was randomly determined, as was the location of each face on the screen. Participants were asked to indicate their choice in the first lineup, then the second lineup, and were then debriefed.

#### Results

- When the dot probe was in the location of the Black face, officers primed with the crime-relevant words were faster to find the dot than officers who were not primed and were also faster to find the dot than behind white face locations.
- Officers primed with crime were slower to find the dot behind the white face than officers who had not been primed with crime-related words.
- When unprimed, participants found the dot faster when it was in the white face location than the Black face location.
- During the facial recognition task, participants were more likely to falsely identify a face that was more stereotypically Black than the target when they were primed with crime than when they were not primed. Thus, thoughts of violent crime led to a systematic distortion of the Black image.

#### Relevance

- This study suggests that not only do stereotypes bring attention to Black subjects when officers are primed with crime-related words, they are also likely to misidentify a face, especially to remember the face as more stereotypically Black. This supports the conclusion that Black people who appear most stereotypically Black may be most vulnerable to false identifications in real criminal lineups. This type of false identification may be likely even when the actual perpetrator is present in the lineup and even when the eyewitness was visually drawn to the perpetrator’s face at the time of the crime.

#### STUDY 5

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Purpose

- To test the hypothesis that police officers view more stereotypically Black faces as more criminal.

#### Methodology

- 182 police officers from the same police department as in Study 4 voluntarily participated in the study.
- In small groups, officers were shown a series of faces (of Stanford students or employees) of the same race. One third of the officers were asked to participate in a stereotypicality measure, rating each face as more or less stereotypical as white or Black. Another third of the officers were told that some of the faces they would be shown would be criminals and were asked to determine whether the face they were shown “looked criminal.” The final third undertook an attractiveness test, rating how attractive each picture was in order to control the fact that Black and white faces used in the study were rated similarly.

#### Results

- Black and white faces rated similarly attractive.
- More Black faces rated high in stereotypicality were judged as criminal than Black faces rated low in stereotypicality. This did not occur in the white face groups.
- Additionally, significantly more Black faces rated high in stereotypicality were judged as criminal than white faces rated high in stereotypicality.
- Highly stereotypical Black faces were more likely to be judged criminal than any other group in the study.

#### Relevance

- These results provide additional evidence that police officers associate Black people with the specific concept of crime.
- Moreover, these results shed light on the face- recognition memory errors made by police officers in Study 4. In that study, police officers were more likely to falsely identify a Black face that was more stereotypically Black than the target when primed with crime than when not primed with crime. Thinking of crime may have led officers to falsely identify the more stereotypically Black face because more stereotypically Black faces are more strongly associated with the concept of crime than less stereotypically Black faces.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

*the Perception of Facial Threat*, 14 Psychol. Sci. 640 (2003).

#### STUDY 1

##### Purpose

- To determine if stereotypes influence perceptions of facial affect.

##### Methodology

- 24 white university students participated in the study.
- Researchers constructed a brief movie clip in which a target's facial expression morphed from unambiguous hostility to unambiguous happiness. Participants watched four movies and indicated when the hostile expression was no longer perceivable.
- Participants also took an explicit bias test and an implicit bias test.

##### Results

- Participants with higher levels of implicit bias took longer to perceive the Black face change from hostile to friendly, but not for white faces.

##### Relevance

- Implicit bias means people may be more likely to interpret Black clients' facial expressions as hostile.

#### STUDY 2

##### Purpose

To test the hypothesis in Study 1 by reversing the order of change from hostile to friendly to hostile, ensuring that people with implicit bias were not just more indecisive when it came to the Black faces.

##### Methodology

- Same methodology as in Study 1, but instead of morphing from unhappy to happy, the faces morphed from happy to unhappy.

##### Results

- Individuals high in implicit prejudice perceived the onset of hostility much earlier for Black faces than did low-prejudice participants. However, response times for white faces were unrelated to implicit-prejudice scores.

##### Relevance

- Confirms the conclusions in study 1.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

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**George S. Bridges & Sara Steen, *Racial Disparities in Official Assessments of Juvenile Offenders: Attributional Stereotypes as Mediating Mechanisms*, 63 Am. Soc. Rev. 554, 561 (1998).**

#### **Purpose**

- To determine if court officials perceive and judge minority offenders as compared to white counterparts.
- To determine if court officials perceive minorities as more likely than white youths to commit future crimes.
- To determine the perceived causes of crime by youth by the court officials making decisions.

#### **Methodology**

- The study analyzed 233 narrative reports written by probation officers in 3 counties in a western state.
- Compared narratives based on age, race and sex of the juvenile offenders; and severity of offense, pretrial detention and prior offenses to control for those variables.

#### **Results**

- Reports on Black youths were more likely to include negative internal attributions (negative personality assessments) than reports for white youth, whereas reports on white youth included more environmental attributions (blaming behavior on negative environmental factors).
- Black youths were judged to have a higher risk of reoffending than white youths.
- Probation officers were more likely to recommend sentences beyond the normal sentencing range when the report included negative internal attributions.

#### **Relevance**

- Provides evidence that probation officers are also affected by implicit bias, and offers some hints as to how to frame issues (based on environmental attributions) that may sway a probation officer's disposition recommendation.
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## **II. Implicit Bias and the Decision to Shoot**

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

**John Tawa, *Racial Essentialism and Stress: A Deadly Combination for Prospective Police Officers' Encounters with Black Suspects, Race and Social Problems* (2022).**

#### Purpose

- To determine the interaction between stress and race essentialism (i.e. the belief that people of different races are genetically distinct) and its effect on incorrect lethal force decisions with Black suspects.

#### Methodology

- 49 white criminal justice majors viewed 360-degree videos of high-pressure suspect interactions in virtual reality (VR), from the perspective of the police officer. Of 12 unique interaction scenarios, 6 included a Black suspect, and 6 included a white suspect. A virtual police-issued handgun was used to make and record decisions to shoot, and participants were told to shoot only if their life or someone else's life was in danger.
- Participants were awarded points for correctly shooting a suspect with a gun and not shooting a suspect holding a benign object and were deducted points for shooting a suspect holding a benign object and for not shooting a suspect holding a gun.
- Physiological stress (i.e., variance in pupil dilation) and visual attention were measured with embedded eye tracking in the VR.
- Belief in racial essentialism was measured using the Beliefs About Race Scale (BARS), which assesses people's belief in racial groups as genetically distinct. Participants rated statements about race (e.g., "During an autopsy, the race of a person can be determined by examining bone structure.") on a 6-point scale with responses ranging from "strongly disagree" (1) to "strongly agree" (6).
- Participants' stress and attention levels and BARS scores were then compared to their accuracy in the VR shooting task by suspect race.

#### Results

- Individually, neither stress nor race essentialism had a direct impact on attention to Black suspects or lethal shooting decisions. In combination, however, they did. Among those who scored high on the race essentialism measure, physiological stress led to more incorrect uses of lethal force with Black suspects.

#### Relevance

- This study suggests that disproportionate use of lethal force against Black citizens may be the result of both underlying biases *and* physiological factors, more so than one or the other.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

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**Balbir Singh et al., *When Practice Fails to Reduce Racial Bias in the Decision to Shoot: The Case of Cognitive Load*, 38(6) Social Cognition 555-570 (2020).**

#### Purpose

- To examine the effect of cognitive load and prior practice on racial bias in the decision to shoot using a first-person shooter task (FPST).

#### Methodology

- Participants were 139 non-black undergraduates and were randomly assigned to a “trained” or “novice” group. “Trained” participants completed 116 practice trials of the FPST prior to testing, “novices” did not. Both groups then performed the FPST under three levels of cognitive load, induced by auditory stimuli and asking them to make judgements of varying difficulty. In each load condition, participants completed 50 trials of the FPST, which involved white and Black targets paired with guns and harmless objects.
- Racial bias was measured by calculating shooting error rates by race of target.

#### Results

- While trained participants showed lower rates of racial bias than novices with low cognitive load, this discrepancy disappeared as cognitive load increased to medium and high. When subjected to a cognitive load, the trained participants showed as much racial bias in response criterion as novices. The benefits of practice were completely erased.

#### Relevance

- The results of this study indicate that the existence of outside stressors can entirely counteract any reduction in racial bias in the decision to shoot resulting from training.

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**Justin D. Durham and Robert D. Mather, *Effect of Priming Black, Hispanic/Latino, and White Faces on Firearm and Non-Firearm Identification* Journal of Scientific Psychology, 41 (August 2020).**

#### Purpose

- To investigate the effect of race and ethnicity on decisions to shoot and not shoot when presented with Black, Hispanic/Latino, and white males. This extends previous weapons-identification research which focused on Black versus white.



## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- Forty college student participants completed a computerized shooter task in which they made rapid repeated decisions to shoot or not shoot.
- Participants were first shown a face, from a sample of 230 non-expressive male faces (86 Black, 54 Hispanic/Latino, 90 white) between the ages of 17 and 65.
- They were then shown either an image of a fire arm or a common household tool.
- Their goal was to as quickly and accurately as possible to the targets by either clicking the mouse to “shoot” or the space bar to “not shoot.” Each participant was given 150 different trials.

#### Results

- Participants significantly shot unarmed Black stimuli more often, more frequently, and at high percentages compared to Hispanic/Latino stimuli and white stimuli.
- Participants produced greater sensitivity to firearms and non-firearms when primed with Hispanic/Latino and Black faces than faces of other ethnicities.
- Participants correctly shot quicker when primed with Hispanic/Latino faces and correctly shot slower when primed with a Black face compared to other ethnicities.
- Participants were more likely to be cautious when deciding to shoot after seeing a white face.

#### Relevance

- Race and ethnicity, including Hispanic/Latino, have an effect on the decision to shoot.

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**Timothy Pleskac, Joseph Cesario, and David Johnson, *How Race Affects Evidence Accumulation During the Decision to Shoot*, 25 Psychonomic Bulletin & Review 1301 (2017).**

#### STUDY 1

##### Purpose

- To determine the impact of racial bias on the time it takes to make a decision to shoot or not shoot a suspect.

##### Methodology

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Participants played a series of trials in a videogame with a first-person shooter task (FPST) and were given 850ms to respond (called the “response window”). In each trial, participants were shown a set of empty background photos with the final photo containing an armed or unarmed white or Black male superimposed on the image. Participants were tasked with quickly and accurately making the decision to shoot or not to shoot the target.

#### Results

- Participants are slower to correctly not shoot unarmed Black targets than unarmed white targets, but are faster to correctly shoot armed Black targets than armed white targets.

#### Relevance

- Confirms the results of previous studies that found participants are more willing to shoot Black targets.

### STUDY 2

#### Purpose

- To examine how a shorter response window impacts the decision to shoot or not shoot and to investigate how context impacts the decision to shoot or not shoot.

#### Methodology

- Participants played the same videogame, but had a shorter period of time (630 ms) to respond to the images.
- For half the subjects, the target appeared in a “dangerous” neighborhood and for the other half, in the same neutral context used in Study 1.

#### Results

- Similar to Study 1, Participants were faster to correctly shoot armed Black targets than white targets, and this held in both neutral and dangerous contexts. However, in Study 2 participants were slower to shoot at both white and Black targets in the dangerous neighborhood. Participants responded to the dangerous condition by seeking to collect a little more information before deciding to shoot, regardless of target race.

### STUDY 3

#### Purpose

- To investigate how discriminability of the object impacts the decision process.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- Participants played the same videogame as in Study 1 and 2, but had a different period of time (750 ms) to respond to the images.
- Researchers used photo-editing software to blur the object shown to participants in half of the trials.

#### Results

- There was a greater proportion of incorrect choices to shoot unarmed Black than unarmed white targets when the object was blurred, however there was not a significant difference in the proportion of incorrect choices to not shoot armed Black than armed white targets. Participants were significantly slower to correctly not shoot unarmed Black targets than unarmed white targets, but there was not a significant difference in response times for correctly shooting armed Black compared to armed white targets.
- Participants were more hesitant to shoot unarmed white targets than Black targets when the object was blurred. This type of race bias can lead to more false alarms or shooting of unarmed Black targets than unarmed white targets.

#### STUDY 4

##### Purpose

- To determine whether using a larger sample size to isolate the effects of race and context has a significant impact.

##### Methodology

- Each participant completed twice as many trials per condition. Participants played the same videogame as in previous studies, however they were given a response window of 630 ms. The background scenes were changed from neutral backgrounds to ones that presented dangerous scenes.

##### Results

- There was a greater proportion of incorrect choices to shoot unarmed Black than unarmed white targets and a lower proportion of incorrect choices to not shoot armed Black compared to armed white targets.

##### Relevance

- Race may impact the decision-making process, predicting both choice to shoot or not and the response time.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

**K. B. Kahn, J. S. Steele, J. M. McMahon, and G. Stewart, *How Suspect Race Affects Police Use of Force in an Interaction Over Time*, 41 Law and Human Behavior 1 (2016).**

#### Purpose

- Examines the differences between police/racial minority-suspect interactions and police/white-suspect interactions over time.

#### Methodology

- Use-of-force case files from a medium to large metropolitan police department on the West Coast were analyzed from a sample of 212 available incidents from 2012.
- The cases were coded into discrete sequences involving a suspect action (level of resistance) and an officer response (level of force) to investigate change over time in police-suspect interactions.
- For each case or “sequence,” coders read the first-person narratives written by police officers following their use of force in the field. Each sequence began with the suspect’s level of resistance to the officer (from a scale of 0 (no resistance) to 6 (use of lethal force)) and ended with the officer’s subsequent actions toward the suspect, coded as level of force (from a scale of 0 (presence; verbal exchange) to 6 (use of lethal force)). When suspects posed a threat to their own safety or the safety of a third party, this action was coded on a scale of 0 (no resistance) to 6 (used lethal force).

#### Results

- For white suspects, a unit increase in resistance received a small additional increase of approximately 1/6<sup>th</sup> of a point in force. When Black suspects resisted at the same level as whites, they received an additional 1/5<sup>th</sup> unit increase in force over and above white suspects. Latino suspects receive more than an additional 1/4<sup>th</sup> unit increase in force over and above white suspects.
- White suspects who posed a threat to third parties or themselves were associated with an overall increase in force. Black and Latino suspects who posed a threat to third parties were associated with less of an increase in force compared to white suspects.

#### Relevance

- Racial stereotypes associating Black people and Latinos with danger may bias perceptions at the beginning stages of an interaction, making the suspects seem more threatening or in need of force to control.
- Since police officers used a higher level of force on Black and Latino suspects initially in the interaction, there may have been a lesser rate of change compared with white suspects.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

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Jessica Sim, Joshua Correll, and Melody Sadler, *Understanding Police and Expert Performance; When Training Attenuates (vs. Exacerbates) Stereotypic Bias in the Decision to Shoot*, *Personality and Social Psychology Bulletin* 291 (2013).

#### EXPERIMENT 1

##### Purpose

- To determine whether shooter training and expertise can enable experts to overcome or ignore stereotypes when executing their responses, even when the stereotype accessibility is manipulated.

##### Methodology

- The final sample included 113 non-Black participants, 45 of which were police officers and 68 undergraduates (41 female, 72 male; 94 white, 11 Asian, 8 Latina/o).
- Undergraduate participants were randomly assigned to one of two training conditions (novice or expert). The “expert” group completed an initial 200 target trial round of a first-person shooter task (FPST) where they were presented with armed and unarmed Black and white male targets embedded in background scenes and instructed to press a button to “shoot” the armed targets or press a different button to “don’t shoot” the unarmed targets. The “novice” group simply observed the stimuli images without completing the FPST. Police officers had no exposure to the stimuli. Then, all participants were randomly assigned to read one of two fabricated newspaper articles (Black-criminal or white-criminal). After reading the article, they were all asked to perform an FPST. All participants had to respond within 630 ms.

##### Results

- “Novices” showed greater bias after reading about Black rather than white criminals, but the articles had no significant impact on racial bias for either “experts” or police officers.

##### Relevance

- Training may be able to reduce the effect of racial bias caused by accessible stereotypes.

#### EXPERIMENT 2A

##### Purpose

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- To determine whether training and experience reinforce the association between Black people and danger.

#### Methodology

- The sample consisted of 71 non-Black participants from the Chicago area, primarily from college, university, and technical/trade school campuses.
- During a training block, participants completed 16 practice trials and 200 training trials. The FPST in Experiment 1 was modified to have one control condition (where Black and white targets were equally likely to be armed or unarmed) and two varied conditions (one where Black targets were more likely to be armed and another where white targets were most likely to be armed).

#### Results

- Participants exposed to the condition where Black targets were more likely to be armed showed significantly more bias than participants exposed to the condition where white targets were more likely to be armed.
- Participants exposed to more armed Black targets acquired experience with the FPST, but their training did not eliminate subsequent bias.
- Participants in the control condition also displayed bias; however, participants exposed to the condition with more armed white targets showed no evidence of racial bias.
- Overall, participants showed greater sensitivity to Black than white targets with participants exposed to more armed white targets being more sensitive to Black targets.

#### Relevance

- Repeated exposure alone is insufficient in teaching participants to overcome racial bias, especially if stereotypes are reinforced in the training environment. Training may be most effective at reducing bias when the trainee must frequently ignore or override relevant stereotypes to execute the correct response.

### EXPERIMENT 2B

#### Purpose

- To determine whether training and experience reinforce the association between Black people and danger.

#### Methodology

- 22 special unit (SU) officers from gang and street-crime units were tested (1 female, 21 male; 12 white, 7 Black, 2 Latino/a, 1 Native American/Pacific Islander). This

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

data was compared with data from 31 patrol officers (3 female, 26 male, 2 unreported genders; 16 white, 6 Black, 4 Latino/a, 3 other, 2 unreported ethnicities) and data from 45 community members (20 female, 23 male, 2 unreported genders; 14 white, 18 Black, 10 Latino/a, 3 other).

- All participants completed the standard FPST from Experiment 1.

#### Results

- Patrol officers displayed less bias than community members. SU officers showed significantly more bias than patrol officers. SU officers showed levels of bias that were comparable to untrained community members.

#### Relevance

- One's environment or professional context may reinforce the utility of race information and even highly trained individuals can show racial bias.

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**Joshua Correll et al., *Across the Thin Blue Line: Police Officers and Racial Bias in the Decision to Shoot*, 92 J. Personality & Soc. Psychol. 1006 (2007).**

#### STUDY 1

##### Purpose

- To establish if police officers are better at the shoot-don't shoot task of identifying suspects who pose actual threats or not in a simulated game. The researchers hypothesized that the race of a suspect would affect the speed but not the accuracy of police decisions in the game.

##### Methodology

- Three samples of participants completed a 100-trial video game simulation in which armed and unarmed white and Black men appeared in a variety of background images. Participants were instructed that any armed target posed an imminent threat and should be shot as quickly as possible. Unarmed targets posed no threat and should be flagged accordingly by pushing the don't-shoot button, again as quickly as possible. The speed and accuracy with which these decisions were made served as our primary dependent variables, and performance was compared across three samples: officers from the Denver Police Department, civilians drawn from the communities those officers served, and a group of officers from across the country attending a 2-day police training seminar.

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#### Results

- On average, officers were simply quicker to make correct shoot/ don't-shoot decisions than were civilians.
- Second, they were better able to differentiate armed targets from unarmed targets.
- Officers may show less bias than civilians in their final decisions.
- Participants seemed to have greater difficulty (indexed by longer latencies) responding to stereotype-incongruent targets (unarmed Black targets and armed white targets), rather than to stereotype- congruent targets. The magnitude of this bias did not differ across the three samples.
- Bias increased as a function of the community's size, crime rate, and the proportion of Black residents and other ethnic minority residents. Police in larger, more dangerous and more racially diverse environments are presumably much more likely to encounter Black criminals, reinforcing the stereotypic association between race and crime. By contrast, officers with little exposure to Black people may be less likely to rehearse this association.
- The expertise that police bring to a shoot/don't-shoot situation may not eliminate the difficulty of interpreting a stereotype-inconsistent target, but it does seem to minimize the otherwise robust impact of target race on the decision to shoot.

#### Relevance

- The race of a suspect does affect a police officer's decision making, although they are very accurate in their shoot or don't shoot decisions given enough time.

#### STUDY 2

##### Purpose

- To study whether police officers maintain their accuracy in the shoot-don't shoot simulation game when they are given much less time in which to make the decision in order to facilitate and analyze more errors.

##### Methodology

- Officers and civilians underwent the shoot-don't shoot simulation and were given much less time in which to make a decision. Failure to make a decision in time resulted in a 20 point deduction.

#### Results

- Civilians consistently set a lower threshold for the decision to shoot (c) than did the officers, and this difference was particularly evident for Black targets.
- Officers and community members both experienced difficulty processing stereotype-incongruent targets.



## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Community members showed a clear tendency to favor the shoot response for Black targets (relative to both white targets and relative to a neutral or balanced criterion of zero). Police, however, showed no bias in their criteria.

#### Relevance

- The race of a suspect does affect a police officer's decision making, although they are very accurate in their shoot-don't shoot decisions given enough time.

#### STUDY 3

##### Purpose

- To study if training helps reduce inaccuracies in shoot-don't shoot simulations through allowing participants to practice, to confirm the theory that training is what differentiates officers from civilians in accuracy rates.

##### Methodology

- 58 student civilian participants played the shoot-don't shoot game twice on 2 days separated by 48 hours.

##### Results

- Although civilians still exhibited shooter bias, bias decreased in the latter round each day.
- There appeared to be no carry over in bias reduction from Day 1 to Day 2.
- Across repeated plays of the video game simulation, these developing "experts" continued to struggle with the stereotype-incongruent targets, responding more slowly on incongruent (compared with congruent) trials.

##### Relevance

- Police training and on-the-job experience in complex encounters may allow officers to more effectively exert executive control in the shoot-don't-shoot task, essentially overriding response tendencies that stem from racial stereotypes.

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Joshua Correll et al., *The Influence of Stereotypes on Decisions to Shoot*, 37 *European Journal of Social Psychology* 1102 (2007).

#### STUDY 1

##### Purpose

- To examine whether the Black-danger stereotype exacerbates bias in the decision to shoot.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- 70 non-Black undergraduates in an introductory psychology class participated in this study.
- Participants were randomly assigned to read an article about either Black or white armed robbers. Afterwards, the subjects played a videogame where they were presented with a random series of empty backgrounds. The final background in each series had either an armed or unarmed Black or white target and the participants were tasked with pressing a “shoot” or “don’t shoot” button within 850 ms.

#### Results

- After reading the article about the Black criminal, participants set a more lenient criterion for the decision to shoot Black rather than white targets. After reading the article about the white criminal, participants showed no evidence of bias.

#### Relevance

- Exposure to information about the Black danger stereotype exacerbates existing racial biases.

### STUDY 2

#### Purpose

- Same as Study 1.

#### Methodology

- The results of 92 non-Black undergraduate students were used.
- The same simulation in Study 1 was used again, however participants played two rounds of the videogame where the first round was manipulated to have an uneven number of Black and white targets. In the first round, participants were either presented with a simulation where Black targets were more likely to be armed and white targets were more likely to be unarmed, or a simulation where white targets were more likely to be armed and Black targets were more likely to be unarmed. In the second round, participants played the original videogame.

#### Results

- Participants who played a round that associated more Black targets with guns demonstrated a more pronounced anti-Black bias in Round 2.

#### Relevance

- Exposure to stereotypic targets in a shoot/don’t shoot simulation increases the magnitude of racial bias.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### STUDY 3

##### Purpose

- To examine the impact of covariation manipulation on stereotype accessibility.

##### Methodology

- The results of 75 non-Black undergraduates were used.
- Participants played the same simulation in Study 2 and were later tasked with classifying male names as either African American (Button A) or Caucasian (Button B). In other trials, participants classified different set of words according to their color by pressing “Blue” (Button A) or “Green” (Button B). Some of the words were related to danger.

##### Results

- Participants who played the videogame that presented more armed Black targets than white targets responded more quickly to danger words when using the Black-name button than the white-name button. Participants who played the videogame that presented more armed white-targets than armed Black-targets showed a non-significant tendency to respond more quickly to danger words when using the white button rather than the Black button.

##### Relevance

- Exposure to stereotypic information temporarily affected stereotype accessibility and increased the magnitude of bias, supporting the prediction that stereotypes promote bias in the decision to shoot.

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**E. Ashby Plant, Michelle Peruche, *The Consequences of Race for Police Officers’ Responses to Criminal Suspects*, 16 Psychological Science 179 (2005).**

##### Purpose

- To determine whether police patrol officers’ responses to criminal suspects are influenced by the suspects’ race.

##### Methodology

- Participants were 48 law-enforcement officers in the State of Florida.
  - 83% male; 84% white, 10% Black, 2% Native American, and 4% Hispanic

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Subjects were presented with a computer simulation and were asked to determine whether or not to shoot their gun when pictures of people with objects appeared on the screen. They were tasked with shooting criminals (Black or white targets who held guns) and not shooting citizens (Black or white targets holding harmless objects, like a wallet). Subjects performed multiple trials of this experiment.

#### Results

- In the early trials, officers demonstrated a higher tendency to shoot Black suspects compared to white suspects.
- However, in later trials, officers demonstrated a lower tendency to shoot Black people that was more similar to their responses to white suspects.

#### Relevance

- Officers are more likely to mistakenly shoot unarmed Black suspects than unarmed white suspects, however officers might be able to eliminate that bias with training.

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*NOTE: The following studies established shooter bias, providing the foundation for the studies above.*

**Anthony Greenwald, Mark Oakes, and Hunter Hoffman, *Targets of Discrimination: Effects of Race on Responses to Weapon Holders*, 39 Journal of Experimental Social Psychology 399 (2003).**

- **Results:** Racial bias can lead people to have a more difficult time distinguishing weapons from harmless objects when Black people hold them. It can also lead people to be quicker to find that Black people are holding dangerous weapons.

**Joshua Correll et al., *The Police Officer's Dilemma: Using Ethnicity to Disambiguate Potentially Threatening Individuals*, 83 Journal of Personality and Social Psychology 1314 (2002).**

- **Results:** The participants' ability to quickly and accurately identify armed men depended at some level on the ethnicity of the man, with African American men holding a weapon being identified more quickly than armed white men and unarmed white men being identified more quickly than unarmed African American men. When African American men perform ambiguous behavior, it is perceived as more hostile, mean, and threatening.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

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#### III. Overcoming Implicit Bias

**Mona Lynch, Taylor Kidd & Emily Shaw, *The Subtle Effects of Implicit Bias Instructions*, 44 Law & Policy 98 (2022).**

##### **Purpose**

- To determine the impact of implicit bias jury instructions in a case where defendant race was varied (Black or white).

##### **Methodology**

- Participants were 352 jury-eligible citizens. Participants were presented with a 70-minute audio and visual trial of a drug case in which the defendant was either Black or white, the testifying witness was either Black or white, and there either was or was not an implicit bias instruction given, resulting in 8 distinct conditions.
- The conditions with the implicit bias instructions were presented with the following statement: “You must decide the case solely on the evidence and the law before you and must not be influenced by any personal likes or dislikes, opinions, prejudices, sympathy, or biases, including unconscious bias. Unconscious biases are stereotypes, attitudes, or preferences that people may consciously reject but may be expressed without conscious awareness, control, or intention. Like conscious bias, unconscious bias, too, can affect how we evaluate information and make decisions. It is important that you discharge your duties without discrimination, meaning that bias regarding the race, color, religious beliefs, national origin, sexual orientation, gender identity, or gender of the defendant, witnesses, and the lawyers should play no part in the exercise of your judgment.”
- After viewing the trial, participants submitted their initial verdict and rated on a five-point scale how confident they were in the verdict. They then deliberated as a group with other jurors in their same condition, at which point they could change their initial verdict. The mock jurors were given 90 minutes to deliberate, and were then required to submit a unanimous verdict, and each individual juror’s confidence in the verdict based on the same 5-point scale.
- Following deliberations, jurors took a survey that assessed their perceptions of the witnesses, defendant, attorneys, and judge, as well as their racial biases.
- Quantitative analysis was conducted by comparing verdicts in the Black defendant and white defendant conditions. Qualitative analysis was conducted by assessing recordings of the deliberations, specifically looking for instances in

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

which jurors explicitly brought up the topic of bias and avoiding bias or referenced the instructions.

#### Results

- There was no significant effect of implicit bias instructions, defendant race, or informant witness race on either the pre-deliberation verdicts or the post-deliberation verdicts. There was also no significant effect of implicit bias instructions on participants scores on the racial bias survey results.
- However, the implicit bias instructions did impact the extent to which participants viewed being unbiased as significant to their duties as a juror. Jurors in the implicit bias instruction condition were more likely to rank considering the case without bias or prejudice as the most important duty of a juror than were jurors in the standard instruction condition. Additionally, those in the implicit bias instruction condition were marginally more likely to reference the jury instructions during their deliberations, and were significantly more likely to reference bias, prejudice, stereotyping, discrimination, or racism in their deliberations.

#### Relevance

- This study suggests that while an implicit bias instruction may increase the focus placed on bias during jury deliberations, it is not sufficient to substantially effect the verdict outcome.

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**Rebecca L. Fix, *Justice is Not Blind: A Preliminary Evaluation of an Implicit Bias Training for Justice Professionals, Race and Social Problems* (2020).**

#### Purpose

- To evaluate an implicit bias training program that examines the effects of profession and racial identity on outcomes, including ethnocultural empathy.

#### Methodology

- The implicit bias training described how implicit biases are formed, how they impact children in the school-to-prison-pipeline and adults in society, the short- and long-term consequences of those biases, and strategies for responding to one's own implicit biases. All trainings were led by a 56 year old Black man who is a Center for Juvenile Justice Reform fellow at Georgetown University and Certified Diversity Trainer.
- Participants who completed the training were 243 justice professionals and 274 non-justice professionals. They were asked to complete a survey immediately prior

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### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- to the training and again immediately following. The survey measured knowledge of implicit bias and ethnocultural empathy.
- Ethnocultural empathy was measured using four different tests or scales. The first was “empathic feeling and expression,” evaluating empathic feelings, thoughts, and actions about other racial and ethnic groups. The second was “empathic perspective taking,” measuring efforts made to understand the perspective of experiences and emotions of people from different racial and ethnic backgrounds. The third scale, “acceptance of cultural differences,” measured how much an individual recognizes and accepts customs of people from different racial and ethnic backgrounds. The final scale was “empathic awareness,” measuring knowledge about the potentially difficult experiences of people from different racial or ethnic backgrounds.

#### Results

- There was significant improvement in knowledge about implicit bias.
- In measuring ethnocultural empathy, researchers found significant improvement in “empathic feeling and expression,” and “empathic perspective taking.”
- “Acceptance of cultural differences” did not improve for justice professionals. Researchers identified changes that could be made in the training to change this.
- Male respondents demonstrated a significantly stronger improvement in “empathic feeling and expression” and “empathic awareness” following completion of the implicit bias training compared with female respondents. This is likely because women had higher preexisting levels of empathy in these areas.
- White participants had a significantly larger improvement in implicit bias knowledge than Black participants. This is likely because white participants had the largest room for improvement.

#### Relevance

- This training holds promise as an intervention for increasing empathy—and reducing implicit bias—among white justice and non-justice professionals.

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**Antonya M. Gonzalez, Jennifer Steele & Andrew S. Baron, *Reducing Children’s Implicit Bias Through Exposure to Positive Out-Group Exemplars*, Child Development (2016).**

#### Purpose

- To examine whether implicit racial bias of children is reduced after exposure to positive Black exemplars.

## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

#### Methodology

- 359 Caucasian and Asian children ages 5-12 years old with a median income of \$75,000 were recruited at a science center to participate in the study.
- Each child's implicit bias was measured by association between racial groups, "Black" and "white," and attributes, "good" and "bad." Categories of race were represented by photos of Black or white Children. Attributes were represented by good or bad words including: happy, fun, nice, yucky, sad, mean, or mad. Participants were to match the photo with the attribute. Reaction times were recorded.
- Next, each child was read 4 vignettes detailing several positive facts about a Black or white adult depicted in a photo. A control group was read vignettes about 4 different types of flowers.
- After hearing the vignettes the implicit bias test was re-administered.

#### Results

- The implicit bias of children ages 9-12 was reduced after exposure to positive Black exemplars. Children 8 years-old or younger were not impacted by this intervention.

#### Relevance

- Children between 9-12 years-old may be at the ideal developmental age to effectively reduce racial bias through intervention. The lack of change in implicit bias among younger children may be due to developmental differences.

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**Jennifer T. Kutoba & Tiffany A. Ito, *The Role of Expression and Race in Weapons Identification*, 14 *Emotion* 1115 (2014).**

#### Purpose

- This study tests whether stereotypes implicitly elicited by a stigmatized racial outgroup member can be moderated by facial expression.

#### Methodology

- Using the weapons identification task, participants were asked to classify pictures of guns and tools that were primed with pictures of Black and white male faces posing angry, happy, and neutral expressions.

#### Results



## Empirical Studies:

### Implicit Racial Bias in the Criminal/Juvenile Legal Systems

- Researchers found that across three measurements (response latencies, error rates, and automatic processing) facial expression modulated implicit stereotyping.
- “Priming with a stimulus containing cues both to threat (race) and approachability (a smile) decreased previously obtained patterns of implicit stereotyping. Specifically, the tendency for Black faces to facilitate responses to guns, whereas white faces facilitate responses to tools, was ameliorated when the faces displayed happy expressions. By contrast, responses were always faster and more accurate to guns after angry Black than angry white primes, but faster and more accurate to tools after angry white than angry Black primes.”
- In other words, a Black angry prime elicited implicit stereotyping, while a Black happy prime diminished implicit stereotyping. Responding after neutral primes varied as a function of the expression context. When viewed alongside more threatening expressions (Study 1), neutral Black targets no longer elicited implicit stereotyping, but when viewed alongside more threatening expressions (Study 2), neutral Black targets primed crime and danger- relevant stereotypes.

#### Relevance

- These results demonstrate that an individual can activate different associations based on changes in emotional expression and that a feature present in many everyday encounters (a smile) attenuates implicit racial stereotyping.

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Patricia G. Devine et al., *Long-Term Reduction in Implicit Race Bias: A Prejudice Habit-Breaking Intervention*, 48 J. of Experimental Psych. 1267 (2012).

#### Purpose

- Researchers developed and tested a multi-faceted prejudice habit-breaking intervention to produce long-term reductions in implicit race bias. The intervention is based on the premise that implicit bias is like a habit that can be broken through a combination of awareness of implicit bias, concern about the effects of that bias, and the application of strategies to reduce bias.

#### Methodology

- The participants were 91 non-Black introductory psychology students (67% female, 85% white), who completed a 12-week longitudinal study for course credit. In the study, people assigned to an intervention group were presented with a bias education and training program, the components of which were intended to increase awareness of bias, increase concern about discrimination, and teach strategies that reduce bias as well as assess strategy use.
- The training component provided participants with a list of five strategies culled

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from the literature and adapted for the intervention. The training explained the strategies in straightforward language with concrete examples of everyday situations in which they could be used. Participants were then asked to generate situations in which they could use each strategy. The strategies included:

**Stereotype replacement** (replacing stereotypical responses for non-stereotypical responses); **Counter-stereotypic imaging** (involving imagining in detail counter-stereotypic others); **Individuation** (preventing stereotypic inferences by obtaining specific information about group members); **Perspective taking** (taking the perspective in the first person of a member of a stereotyped group); and **Increasing opportunities for contact** (seeking opportunities to encounter and engage in positive interactions with out-group members).

- To evaluate the effectiveness of the full intervention, researchers examined its impact on an indicator of implicit bias (using the Black-white Implicit Association Test) and a variety of explicit measures (including racial attitudes, the sources of motivation to respond without prejudice, prejudice-relevant discrepancies, and concern about discrimination in society) longitudinally. Because the intervention included education about the adverse effects of discrimination, researchers also developed a measure assessing concern about discrimination in society.

#### Results

- In the 12-week study, people who received the intervention showed dramatic reductions in implicit race bias. People who were concerned about discrimination or who reported using the strategies showed the greatest reductions. The intervention also led to increases in concern about discrimination and personal awareness of bias over the duration of the study. People in the control group showed none of the above effects.
- The intervention seems to increase both personal awareness of one's bias and a general concern about discrimination in society. The effect of the intervention on concern grew more pronounced over time, potentially suggesting that the intervention created an increased caring about subtle instances of bias and discrimination. Researchers suspect that the intervention caused people to become more attuned to their own spontaneous biases and everyday instances of discrimination and that these experiences, coupled with increased caring, may have created ever-rising levels of concern.

#### Relevance

- Our results raise the hope of reducing persistent and unintentional forms of discrimination that arise from implicit bias.

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Saaïd A. Mendoza, Peter M. Gollwitzer & David M. Amodio, *Reducing the Expression of Implicit Stereotypes: Reflexive Control Through Implementation Intentions*, 36 *Personality & Soc. Psychol. Bull.* 512 (2010).

#### STUDY 1

##### Purpose

- To establish the extent to which implicit bias is controllable when someone makes a deliberate effort to do so by being told to not focus on the negative stereotype, rather than trying to change the automatic associations made by participants.

##### Methodology

- 74 non-Black native English-speaking undergraduates participated.
- Participants were asked to complete a shoot/don't shoot task, but before they participated in the task were told explicitly to repeat and re-type: "You should be careful not to let other features of the targets affect the way you respond. In order to help you achieve this, research has shown it to be helpful for you to adopt the following strategy: If I see a person, then I will ignore his race!"

##### Results

- Participants were more likely to shoot unarmed Black targets than unarmed white targets, and more likely to not shoot armed white targets than armed Black targets.
- The group given special instructions performed with significantly greater accuracy than the group without the instructions.
- Although the instructions helped the accuracy of decision-making in general, it had a greater effect on accuracy of decisions made regarding Black targets.

##### Relevance

- Strategies exist that can help defenders and other system actors to successfully combat their automatic implicit biases.

#### STUDY 2

##### Purpose

- To establish if explicitly focusing on the goal of a particular task can reduce implicit racial bias.

##### Methodology

- 92 non-Black native English-speaking college students participated.

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- Participants were asked to perform a shoot-don't shoot task, but before were instructed either to adopt one of the two of the following strategies: "I will always shoot a person I see with a gun!" and "I will never shoot a person I see with an object!" or "If I see a person with a gun, then I will shoot!" and "If I see a person with an object, then I will not shoot!"

#### Results

- Participants were more likely to shoot unarmed Black targets than unarmed white targets, and more likely to not shoot armed white targets than armed Black targets.
- The participants who were instructed using the "if-then" structure of instructions performed more accurately on the task than those instructed with no strategy or with the simple goal strategy.

#### Relevance

- This study gives us guidance on the types of strategies most effective for overcoming implicit bias by intentionally addressing the bias rather than through other methods of altering unconscious associations.

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**Nilanjana Dasgupta & Anthony G. Greenwald, *On the Malleability of Automatic Attitudes: Combating Automatic Prejudice with Images of Admired and Disliked Individuals*, 81 J. Personality & Soc. Psychol. 800 (2001).**

#### Purpose

- To establish whether exposure to pictures of admired or disliked members of a group can reduce automatic preference for white over Black Americans.

#### Methodology

- 48 non-Black college students participated
- Participants were shown pictures of either admired Black and disliked white individuals (pro-Black exemplar condition), disliked Black and admired white individuals (pro-white exemplar condition), or nonracial exemplars (control condition). Participants' task was to correctly identify the person (or object) seen in the pictures. After exemplar exposure, implicit racial attitudes were measured with the IAT and explicit racial attitudes were assessed. 24 hours later, the implicit attitudes were measured again.

#### Results

- Exposure to positive Black examples had a substantial impact on automatic racial

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- associations, and the impact on the implicit bias results lasted for 24 hours.
- Exposure to positive Black examples had no impact on explicit biases reported immediately or 24 hours later.

#### Relevance

- This study offers another model in terms of how to combat implicit racial bias.